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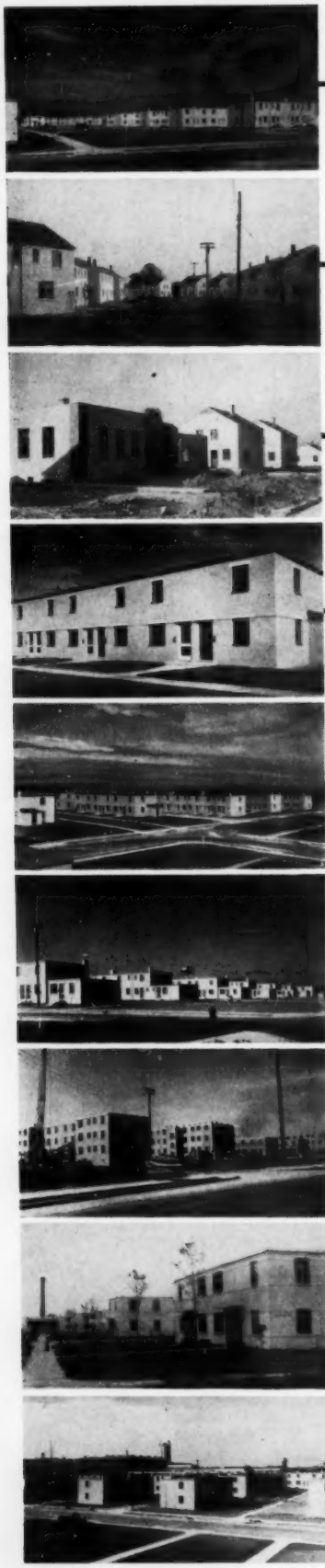
Housing

October 1951

Special Issue



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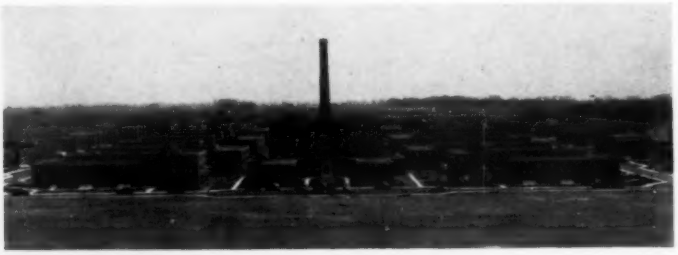

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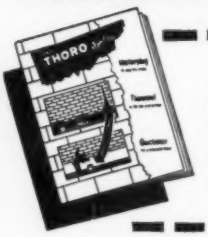

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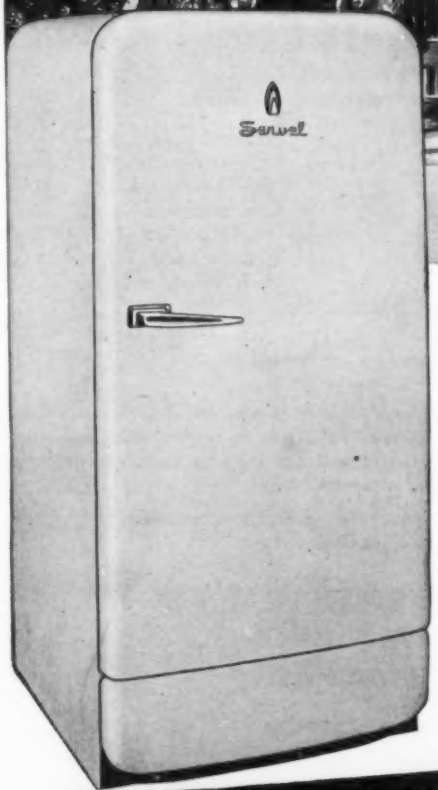
"LESS THAN $10

to maintain 44 Servels for 10 years"



NOTE: *Silent Servels serve Housing Projects at Oxnard, California, and Corpus Christi, Texas, featured in this issue.*

This report comes from Mrs. W. J. Esch, owner of the Stanley Hall Court in Minneapolis, Minnesota

MAINTENANCE COST is a mighty important factor in determining the best-type refrigerator for multiple installations. That's why the Gas Refrigerator is the choice of experienced owners like Mrs. Esch, who has been "more than satisfied" for ten years. And her testimony is typical of that of owners in all parts of the country:

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This extraordinary performance by Servel through the years is due to *basic* differences in the most important part of a refrigerator —the freezing system. Servel has a "no moving parts" system. There's no motor to fail; no machinery to wear or break down. A tiny gas flame does all the work. Such a system lasts *much* longer . . . requires *much* less expense for upkeep.

Be sure to compare the 1951 Servel. Designed for a long life by the renowned Walter Dorwin Teague, it offers tenants not only the pleasure of *silence* but also a handsome, spacious cabinet fitted with every modern worth-while convenience. Consult Sweet's "File for Builders" or write to Servel, Inc., Evansville 20, Ind.

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Servel

The GAS Refrigerator

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EXPLOSION

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$38.00 if oil (633 gals.)
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STOP this needless WASTE during today's MATERIAL and MANPOWER shortages with 'SEXAUER' "Easy-Tites" that outwear ordinary faucet washers 6-to-1, thus SAVING labor on 5 REPEAT repairs, PLUS water and fuel, while prolonging the life of SCARCE fixtures.

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"EASY-TITE"
FAUCET WASHERS

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Built like a tire with fabric re-inforcement they resist the grinding, closing squeeze that SPLIT and MUSH ordinary washers out of shape...causing LEAKS.

Through combining NEOPRENE and FABRIC RE-INFORCEMENT they OUTWEAR ordinary washers 6-to-1 on hot or cold TAPS—thus you slash water fuel and labor costs.

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Then too, there's a SEXAUER TECHNICIAN within quick call from coast-to-coast, who offers a special SURVEY service that sets up a schedule of the exact replacement parts required for your particular plumbing fixture regardless of make or age and *without obligation.*

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Journal of Housing

OCTOBER 1951
Volume 8 — Number 10

Monthly publication of the
NATIONAL ASSOCIATION OF HOUSING OFFICIALS
1313 East Sixtieth Street, Chicago 37, Illinois

287

Subscriptions to the JOURNAL OF HOUSING are $5; also available through membership in the Association at the rate of $10. Entered as second class matter October 25, 1944, at the post office at Chicago, Illinois, under the Act of March 3, 1879.

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Special Editorial Advisory Board

For this special issue of the JOURNAL OF HOUSING, the Architects' Advisory Committee of the Public Housing Administration acted as an editorial board. Projects featured are those recommended by the committee.

COMMITTEE CHAIRMAN: William W. Wurster

Henry Churchill
Vernon DeMars
O'Neil Ford
Douglas Haskell
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George Fred Keck
Robert Woods Kennedy
Marion Manley
Richard Neutra
John J. Rowland
Eero Saarinen
Hugh Stubbins, Jr.
Wallace Teare
Louis Wetmore
Julian Whittlesey

Pictures of committee members are carried on page 338

In addition, committee member George Fred Keck and Chicago architect Harry Weese were designated by Chairman Wurster to make final selections from among recommended projects and to consult with the JOURNAL editors on features of the projects to be emphasized in the presentations.

The editors of the JOURNAL OF HOUSING take this opportunity to publicly express their deep appreciation of the committee's help.

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. . . and for help with the temperature control, we'll talk to Honeywell!

Obviously, cartoonist Crockett Johnson's character, Mr. O'Malley, isn't the most practical architect in the world. But, he certainly has a mighty practical approach to the problem of temperature control.

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FIRST All Prefabricated Low-Rent Project will Use NATIONAL HOMES!

For the first time in history, a low-rent housing project is to be built entirely with prefabricated units. This is the Georgetown Project of the Housing Authority of Vermillion County, Illinois. It will consist of thirty 1, 2, 3 and 4-bedroom duplexes produced by National Homes Corporation and erected by Ozier-Weller, Inc., Champaign, Illinois, a National Homes dealer-builder. A proceed order was issued by the Public Housing Authority on August 31.

Here is convincing proof that National Homes have: (1) **Durability** required for 40-year housing; (2) **Low Maintenance Cost** essential for low-rent projects; (3) **Completeness**—"package" method — reducing site labor to a minimum; (4) **Quality** materials throughout, assuring comfort and satisfaction for every occupant.

The Nation's largest producer of prefabricated homes — nearly 11,000 in fiscal year ending June 30, 1951 — welcomes inquiries from housing officials. Escorted tours of our plants arranged to suit your convenience.

National Homes CORP.

Lafayette, Indiana • Horseheads, N.Y.

RUSCO HOT-DIPPED GALVANIZED PRIME WINDOW

winning rapid acceptance for all types of building

Revolutionary new pre-assembled unit can be fully installed in *minutes* . . . makes big savings in time, labor and maintenance

SHAKER TOWERS, CLEVELAND, OHIO
A Deluxe 92-apartment unit featuring the finest equipment throughout. Built by the Shaker Coventry Corporation. Rusco Prime Windows with insulating sash used exclusively on the 1,367 windows.

ARCHITECT: Joseph Ceruti
STRUCTURAL ENGINEERS: Barber & Magee
GENERAL CONTRACTOR: Roediger Construction, Inc.

THINK OF IT! A *complete* window unit—factory painted, fully assembled with glass, screen, built-in weather-stripping, insulating sash (optional) and wood or metal casing—all ready to place in the window opening. In many types of construction the Rusco Prime Window can be *fully installed in 5 minutes or less!*

Architects and builders report substantial savings in time and labor on Rusco Prime Window installations. Maintenance is minimized, too, because of the triple weather protection of hot-dip galvanizing, Bonderizing and baked-on outdoor enamel finish. And standard-sized interchangeable glass and screen inserts permit making any breakage repairs in the maintenance shop, if desired. For full information and specifications, write Dept. 7, The F. C. Russell Co., Cleveland 1, Ohio.

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PRIME WINDOW
(VERTICAL SLIDE)

RESIDENCE OF MORRIS GARFINKEL, FREEPORT, LONG ISLAND, N. Y.
Rusco Prime Windows with insulating sash are used on all windows except the fixed units of this beautiful home. Used as flankers for the picture window installations, they provide rainproof, draft-free, filtered-screen ventilation.

GLASS AND SCREEN INSERTS EASILY REMOVED FROM INSIDE FOR CONVENIENCE IN CLEANING. The Rusco removable sash feature has tremendous appeal as a convenience and safety feature.

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World's largest manufacturer of all-metal combination windows

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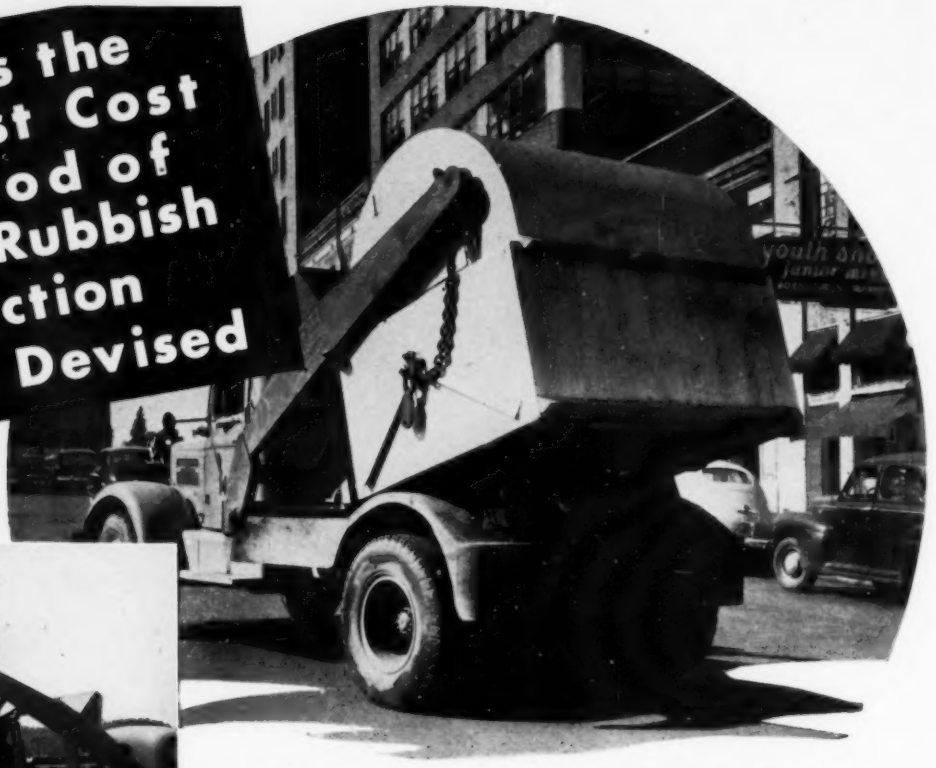

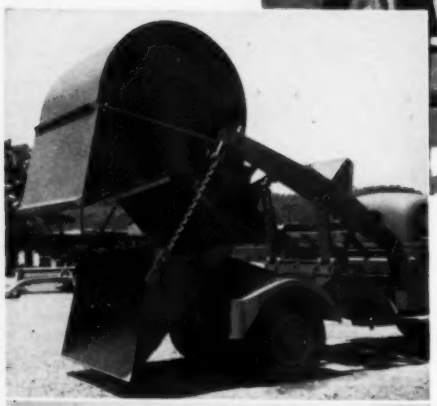

PICK UP, HAULING AND DUMPING operations are shown above. Large photo shows Dempster-Dumpster hauling a pre-loaded 10 cu. yd. container from downtown Nashville to sanitary fill.

You can cut your cost of trash and rubbish collection in half with the Dempster-Dumpster System. We know this because it is being done in other housing and apartment areas. This remarkable system comprises one or more truck-mounted Dempster-Dumpsters, each with only one man, the driver, which services scores of detachable Dempster-Dumpster Containers. Containers of various designs range in size up to 12 cu. yds. (two and one-half times the capacity of the average dump truck). Each pre-loaded container is picked up, hauled to disposal area, emptied and returned. Entire operation is handled hydraulically by means of controls in truck cab.

The Dempster-Dumpster System triples man-hour efficiency . . . reduces truck investment, gas, oil, maintenance costs . . . improves "housekeeping" methods . . . reduces fire hazards . . . provides an easier, quicker, safer and more effective manner of handling bulk trash and refuse.

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AMERICAN-Standard

First in heating . . . first in plumbing

Massachusetts veterans' housing project is more convenient, more comfortable because it's AMERICAN-Standard equipped . . . throughout

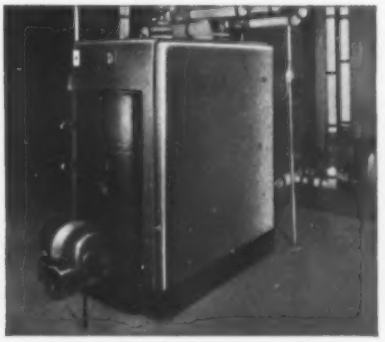
■ Though this Middleborough, Mass., project was subject to the most rigorous economies in construction, it is unusually attractive. Among the features that give an added measure of tenant—and management—satisfaction are the site planning to take advantage of the natural landscaping . . . and the use of smartly-styled, sturdily-constructed American-Standard heating equipment and plumbing fixtures throughout the dwellings.

Famous for their design and engineering advantages . . . for efficient and economical service . . . American-Standard products are available in a wide variety of models, sizes and types. Whatever *your* heating and plumbing needs—for single units or multiple family dwellings, small budget job or large—you are sure to find the exact products for your job in the American-Standard line, the most complete in the field.

Architect: Kennedy and Smith, Boston, Mass.
Engineer: Gordon E. MacNeill, Boston, Mass.
General contractor: Hayes & Watkins Construction Co., Brockton, Mass.
Heating contractor: Miles Plumbing & Heating Co., Inc., Brockton, Mass.
Plumbing contractor: Ernest Margeson, New Bedford, Mass.
Wholesale distributor: F.W. Webb Mfg. Company, Boston, Mass.

The Master Pembroke bath and Hexagon lavatory in this Middleborough bathroom are of durable cast iron heavily coated with lustrous, easy-to-clean enamel. The water closet is of genuine vitreous china. And note the trim and smartly styled convector. American-Standard convectors are used throughout the project.

Occupying minimum space, this Duplex Hostess sink and laundry tray in a Middleborough kitchen is convenient to use, easy to keep clean. It has an 8"-deep sink well on one side, a 13"-deep laundry compartment on the other, and a movable drainboard. Made of rigid cast iron with a thick enamel coating.



Each unit of the Middleborough Housing Project is equipped with a compact Severn Oil Boiler, assuring good heating at minimum cost. Here, the Severn is co-ordinated with an Arcoflame Oil Burner for top efficiency. The Severn is available in sizes to fit a wide variety of installation requirements.

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George Fred Keck

". . . the public housing cause on the qualitative side . . . is truly a doleful picture . . ."

". . . all architects have to design within the requirements of the Public Housing Administration. We recognize, of course, that such requirements are necessary, but they do, by their very nature, limit originality in design . . ."

"Too many firms of architects turn out designs without talent and without consideration of the problem. . ."

Churchill

Kahn

The above quotations from—and to—members of PHA's Architects' Advisory Committee, which acted as an editorial board for this issue of the JOURNAL OF HOUSING, both state the problem treated by this special issue and indicate what its roots may be: a combination of architects who take the easy way out and the inevitable sterility that comes from the imposition of too many and too detailed standards.

The ten designs reproduced in the following pages were hard to find. Almost four months went into the job of tracking down these ten projects—some of them old ones that have been in use for 15 years; others new ones now in design and construction stages. Eight of them are PHA aided developments; two of them are state and city aided.

The eight PHA aided projects represent *less than 7/10 of 1 per cent of the more than 1200 federally aided low-rental projects now either up and occupied or presently under construction.* Assuming that there may be another 10 or 12 projects that should have been published in this issue of the JOURNAL, only some 2 per cent of the federally aided public housing program can be said to meet the standards set up for inclusion in this issue of the JOURNAL:

1—Thoughtful design, directed toward utilizing every inch of the space allowed in order to provide maximum possible convenience and amenity for the family living functions involved.

2—Imaginative, ingenious site planning to give all possible units the advantages of sun, prevailing winds, view, private outdoor space.

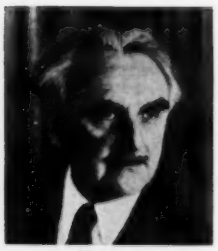
3—Progressive ideas in use of construction materials and methods in order to achieve economies, efficiencies.

This issue, then, is a challenge for the several hundred projects now going into the design stage and for the additional thousands of units authorized to be erected by 1955 under the limit of 810,000 units carried in the Housing Act of 1949—and the thousands of others that may go forward under state or city programs.

Every project built by a local housing authority could well be an outpost of the spacious, efficiently functioning cities of tomorrow that are the goal of the urban redevelopment provisions of the Housing Act of 1949—a program that must place a heavy reliance on publicly financed housing as redevelopers take their first bites out of slum areas. The ten projects featured here prove that it *can* be done, in spite of cost limits and in spite of all the other difficulties that often seem to bar the way.

Kennedy

Manley



Neutra

Saarinen

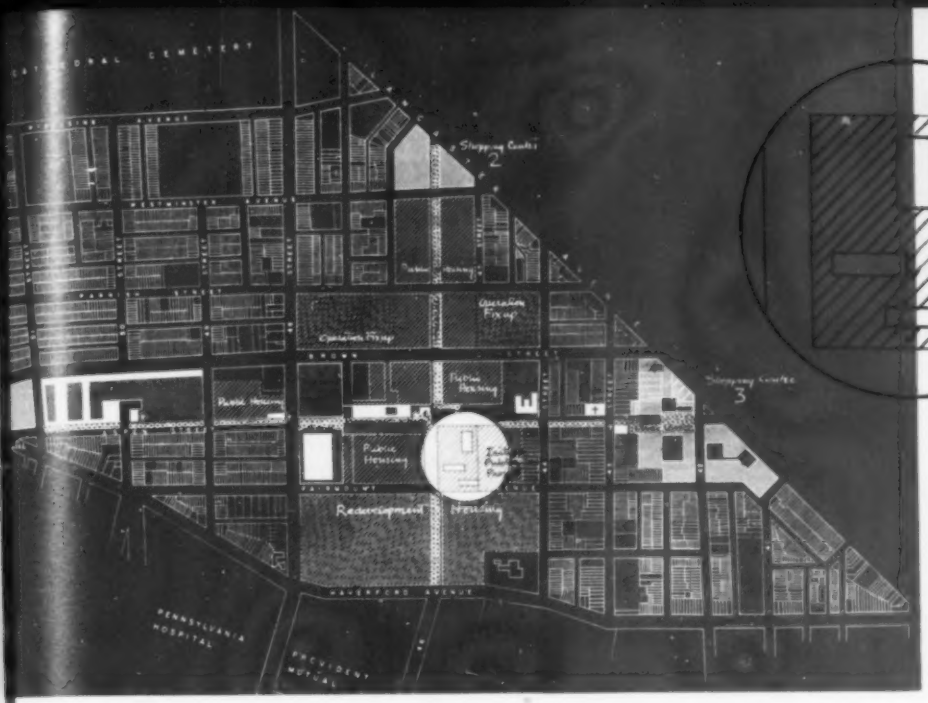
Stubbins

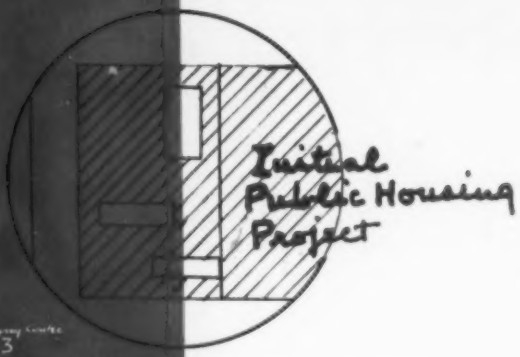
Teare

Wetmore

Whittlesey

Four committee members not pictured—see listing page 332





MILL CREEK

96 UNITS

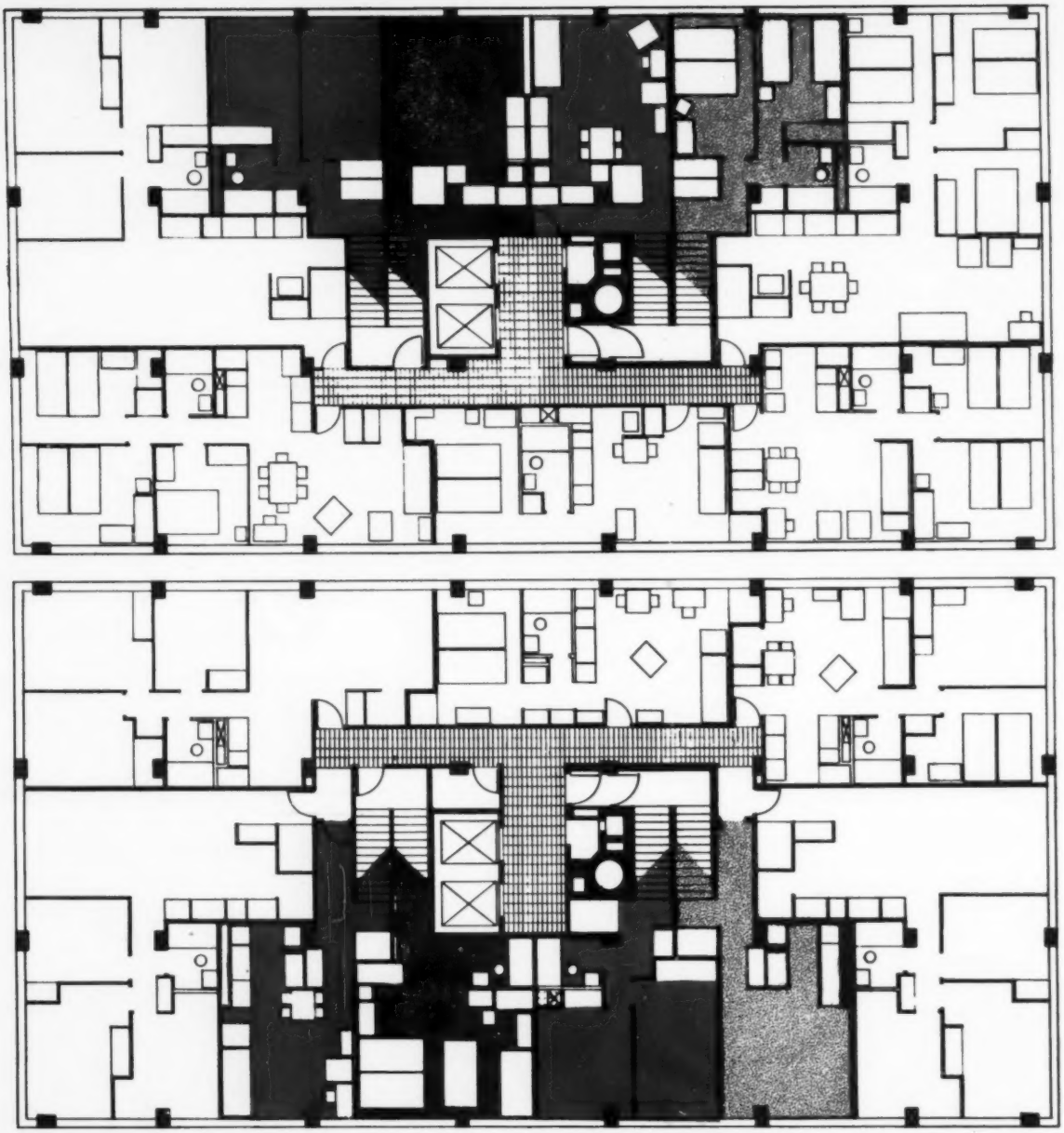
PHILADELPHIA HOUSING AUTHORITY

The Old, the New, Plenty of Air

KAHN, McALLISTER, BRAIK, and DAY, Architects

DANIEL KILEY, Landscape Architect

CORNELIA HAHN, Associate



Careful study that went into the plans for the multi-unit building is obvious from the drawings shown here of two of its floors. Lower plan shows the typical layout of floors 2, 4, 6, 8, 10, and 12; upper shows floors 3, 5, 7, 9, and 11. Corner apartments, of course, all have cross ventilation.

To achieve the cross and through ventilation sought, interior two- and three-bedroom units are planned on two levels, so that, for example, the living room faces east with stairs leading up from it to the two bedrooms on the floor above that face west. Through ventilation is thus achieved from living rooms on one level to bedrooms on the next via a set of private stairways.

Each floor has one one-bedroom unit, which is the only apartment on the floor without through ventilation.

The ingenuity of the arrangement of the two-bedroom interior apartments shows up in the diagram. On the west side of one floor are placed a living room, four bedrooms, and another living room, halves of four different units. On the floor above, accessible by private inside stairways, are their corresponding two bedrooms, living room, living room, and two more bedrooms. The elements of each unit can be identified and matched up from the colors on the plans.

In the space left on the east and west sides, alternating with each floor, have been placed the one-bedroom units.

Other features of these apartments include grouped plumbing, kitchens set in alcoves wherever possible, and another set of stairways for public use.

INGENIOUS is the word for the plans that will guarantee cross or through ventilation to almost every unit in a 12½-story apartment building plus convertibility of interlocking three- and four-bedroom units in two row houses—the three buildings that are to be the first housing raised for Philadelphia's Mill Creek area.

The Mill Creek section comprises 290 acres that are scheduled for redevelopment through a combination of publicly and privately financed building and remodeling. Ultimate aim for the redevelopment area is to maintain as much of the original contours, foundations, and superstructures as possible, that the old may enhance the new.

Of the five sites within the area that are to be devoted to public housing the one highlighted on page 339 is the first and the only one thus far for which a high-rise building is planned. It is expected that this building will house people displaced by the slum clearance and redevelopment projects. Only two other buildings, row houses, are slated to go up on this site.

In order to carry out the basic concept for the area, that of retaining all that can be kept of the old, the high-rise building has been placed on a natural mound at the north end of the site. Steep slopes of the land have been graded gently and there is a difference in grade between the east and west sides of the building, which permits of a maintenance area entrance at street level and another at the garden area a story above the street. Row houses have been situated on lower parts of the site to point up their contrasting scale. Existing trees, fences, and foundations are to be used for landscaping, play enclosures, and "ground sculpture."

This initial site consists of 1.7 acres with a land coverage of 17.14 per cent; there will be 55.57 dwelling units per acre.

Construction, Costs

Both the row houses and the apartment building will be of reinforced concrete, flat plate construction, faced with brick. Built up roofing will be used. Units will be provided with combined kitchen sink and laundry trays. Steam heat will be furnished from a central plant in the apartment building. Floors will be concrete in the multi-story building, concrete and hardwood in the row houses.

Anticipated costs for buildings and equipment run to $9707.80 per unit and $1961.41 per room.

Development

As yet these units are still in the planning stage. But the authority expects to break ground for them during the second quarter of 1952 and they should be ready for occupancy in 1953.

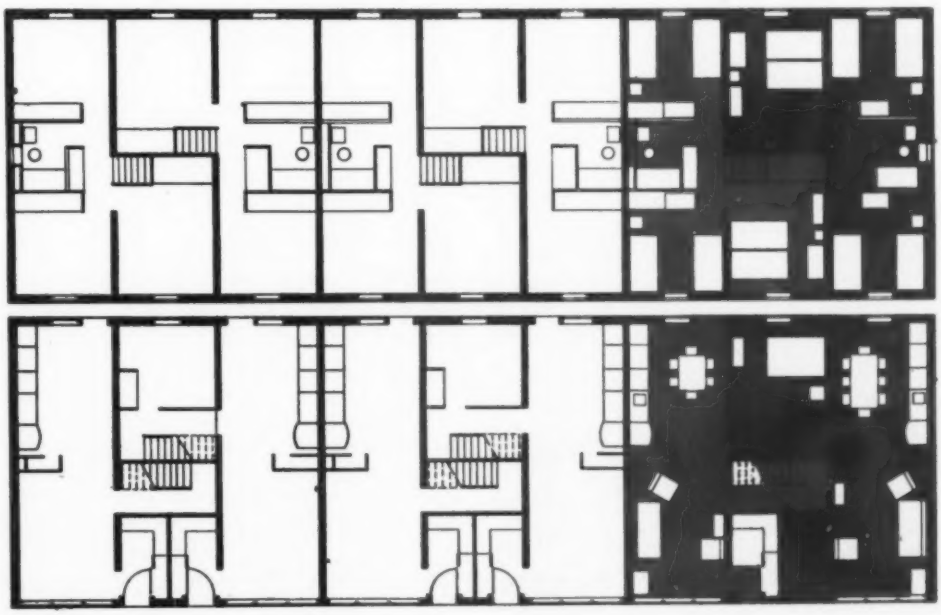
Units

Apartment building:	12 one-bedroom
	35 two-bedroom
	37 three-bedroom
Two-story row houses:	6 three-bedroom
	6 four-bedroom
Total:	96 units

Unit Design

Plan below shows the lower and upper floors of the two-story row houses and illustrates the principle of interlocking units. Here all units have been planned to have either three or four bedrooms but, with very slight changes, they can be converted into two- and five-bedroom units. Space is so planned that master bedrooms are large enough to accommodate a crib and secondary bedrooms will take two beds each and are of the same size. This attention to size allows flexibility in the number of people that can be accommodated in the units, at the same time that a standard design simplifies construction and lowers costs.

The four-bedroom unit has one bedroom on the first floor, the other three on the second. The first floor room has private access to the stair. All units are arranged for a maximum of privacy; the architects have seen to it, for instance, that bedrooms of one unit are not situated over living or bedroom areas of another.



MILWAUKEE—1937

PUBLIC WORKS ADMINISTRATION

518 UNITS

ALLIED ARCHITECTS OF MILWAUKEE,
Architects, Site Planners

FRANZ LIPP, Landscape Architect

Parklawn – Like Living in a Park

Managed by MILWAUKEE HOUSING AUTHORITY

WIDELY acclaimed by architects and planners for its fine site plan, Parklawn has stood the test of nearly 15 years of occupancy and continues to be a model of good site layout. In designing the project, the architects, a group of 14 formed specifically to work out Parklawn, provided tenants with parklike surroundings, a high degree of individual family privacy, and a sense of spaciousness.

Site Design

Major objectives of the site plan, as conceived by the Allied Architects of Milwaukee, were twofold: to achieve a maximum of safety while reducing maintenance costs to a minimum; and to secure for the tenants a large measure of privacy, avoiding monotony in the general arrangement and insuring pleasant, open views of both architecture and landscape.

In order to realize these objectives, the designers adopted as a site plan a scheme of open courts and incorporated only one main, circular street within the project. There are no alleys and service drives were kept to a minimum. Open courts permit a degree of variation in building arrangement and landscaping that makes an over-all view of the project interestingly varied despite necessary repetition of building types and a twice repeated general pattern. This pattern can be seen clearly in the airplane view (page 343) simply by bisecting the site through the smoke stack.

The unusually varied effect of the Parklawn plan is especially well emphasized in contrast to the recent private housing development that has been built directly opposite it (shown in the foreground of the pilot's eye view on page 343). Planning of this development is wasteful and dull in comparison to the low-rent project it faces, affording the owners less space, view, and general amenity than they could have had under a Parklawn site plan.

Generous plantings of trees and shrubs and allowance for plenty of open space, together with a large, almost centrally located playground area that is equipped with a social center to provide year-round recreation activities, all contribute to the parklike effect of Parklawn.

The site covers 35.92 acres; 16 per cent, or 5.92 acres, is occupied by project buildings. Density is 14.4 families per acre. Parking space is provided for 249 automobiles in 74 garages and 157 parking lot spaces.

Building Design

Row house buildings were chosen as the type of structure most adaptable to the site plan objectives. They were varied occasionally with single-story dwellings and two-story walk-up apartment buildings that together contain all the one-bedroom units, numbering 136. There are in the two-story row houses 300 two-bedroom units and 82 with three bedrooms. The one-story, one-bedroom units are attached to the ends of some of the row houses. Room ratio is 4.4.

Construction

Buildings are fire resistive, of masonry construction with exterior walls of Chicago common brick facing over load bearing hollow tile back-up. Plaster 2 inches thick covers the interior partitions; floors are solid slab reinforced concrete supported on reinforced concrete beams and columns.

Costs

Total development cost, including the site, came to $4494 per dwelling unit. Construction cost per room was $1109;

PRETTY PARKLAWN SITE, BACKGROUND; STEREOTYPED PRIVATE HOUSING SITE, FOREGROUND

these figures include site improvement and all other non-dwelling costs except actual purchase of the site. However, the WPA contributed an indeterminate amount in improving surrounding streets and providing drainage facilities for the area, which amount would normally have been assessed against the project but is not reflected in the cost figures.

Limitations, Advantages

Despite the careful and imaginative planning that went into Parklawn, certain disadvantages were bound to become apparent with time—and they have. For instance, while a number of storage and maintenance functions were assigned to each unit (in the effort to provide as many as possible of the amenities of separate living), insufficient space was alloted to accommodate them. Basements, which are lacking, would have given the room necessary for storage of screens, sash, and children's equipment and for indoor laundry drying.

Basements would also have prevented the dampness and condensation that has proven to be a problem with the crawl spaces provided in their place.

Again, the safety and privacy furnished by omission of streets, alleys, and frequent service drives have in turn meant sacrifice of the city's services in door-to-door rubbish and garbage collection. Since garbage stations for each unit are located on porches close to kitchens, project maintenance personnel must move refuse to central collection points, thereby adding to maintenance costs.

These limitations notwithstanding, however, Parklawn still stands as an example of a site plan that introduced individual privacy and pleasant, tree studded views into project living.

Equipment

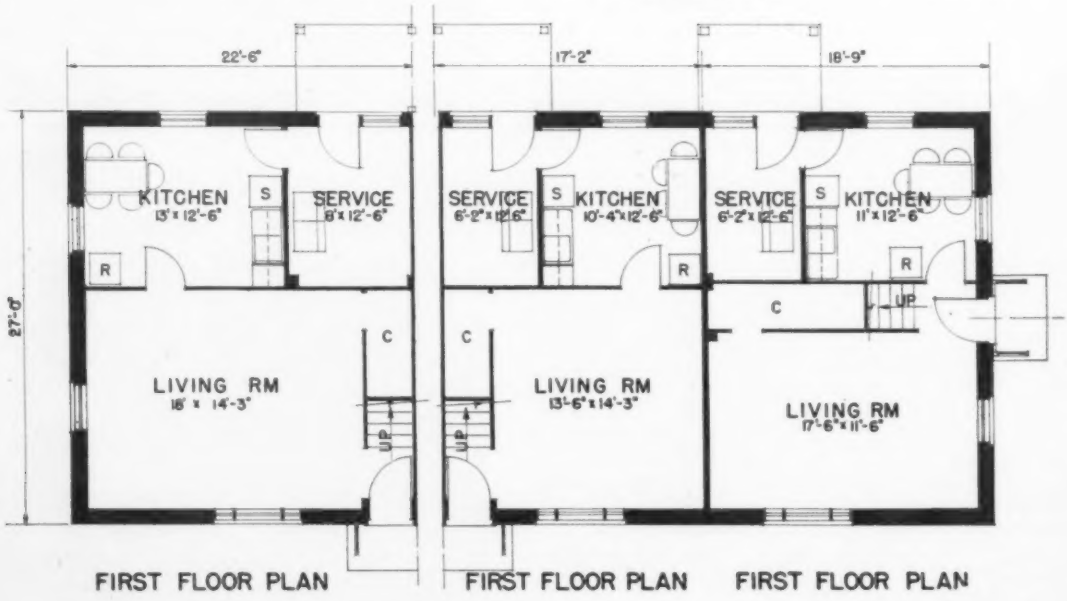
Heating plant equipment was furnished by the following companies: Kroeschell boilers, Detroit stokers, Barber-Colman heat controls, and Crane radiators.

Kitchen ranges were furnished by General Electric; refrigerators by Westinghouse; kitchen sinks and bathroom plumbing are American Standard; hardware and locks were made by Norwalk.

VINES, PLANTINGS ENHANCE THE SITE

TYPICAL THREE BEDROOM

TYPICAL TWO-THREE BEDROOM
INTERLOCKING TYPE



SAN PEDRO, CALIFORNIA

COMPLETED JUNE 1943

LOS ANGELES HOUSING AUTHORITY

Channel Heights – Spacious Living

600 UNITS — WAR PERMANENT

RICHARD J. NEUTRA, *Architect*

OF ALL the honors that the architect and owners of Channel Heights have received (the Museum of Modern Art named it best planned project of the 1940-1950 decade; the Southern California chapter of the A.I.A. gave Architect Neutra a certificate of honor for it) few please them more than the comment of passers-by, "it doesn't seem like a housing project."

Indeed, probably no term better describes the project, built for wartime shipyard workers and now housing low-income families, than "spacious hillside village."

Internationally known Architect Neutra, commissioned in 1942 to design the project within strict budgetary limits and materials shortages, turned the war-dictated liabilities into assets on the beautiful rolling site that overlooks the seaport of San Pedro and the blue Pacific beyond the breakwater.

In spite of rising wartime costs, the entire development, including land, site improvements, and community buildings, was built for $4343 per unit; construction costs averaged only $2835 a unit.

Today, after seven years of tenancy, the project is still sturdy, still retains its charm—and stands as a sort of monument to the architect and housing authority—pioneers in bringing functional design into the public housing field.

Open Site

Perhaps most important in achieving the feeling of a "hillside village" is the openness of the site—only four dwellings per acre and a land coverage of 6.08 per cent. Moreover, by thoughtful site planning, Mr. Neutra has oriented every living room for a panoramic view of the ocean.

A continuous central park area extends through the project and radiates in the form of what the architect calls "finger" parks between the homes. These "finger" parks are used as easy throughways to the central green area adjacent to a day care center, the kindergarten, community and administration building, and the school site. Nearby is the community shopping center and to the west the project grounds adjoin Peck Park, a Los Angeles city maintained area.

Four different types of buildings—none with more than four families—range in size from one- to three-bedroom units. Most of the buildings are one-story duplexes, although there is a sprinkling of two-story structures. Upstairs bedrooms have balconies overlooking the sea.

Originally, exterior cement surfaces were of varied light colors set off by natural redwood patios and outside stairways. Today, the housing authority has found it necessary to treat the redwood with permanent paint and simplify the color scheme of the exterior walls.

Back Doors on Street Side

"Back" doors of the units face on the street sides of the project, a controversial design feature as far as tenants are concerned, since it results in *all* incoming traffic to the unit—visitors as well as deliveries—making a kitchen entrance. Mr. Neutra, however, says the heavy use of the so-called rear door, which relates the service part of the house to the individual parking area just outside, "was completely within the plan and intent of the design." In fact, Mr. Neutra goes on: "The architect would also have preferred that the mail man deliver mail at this rear door."

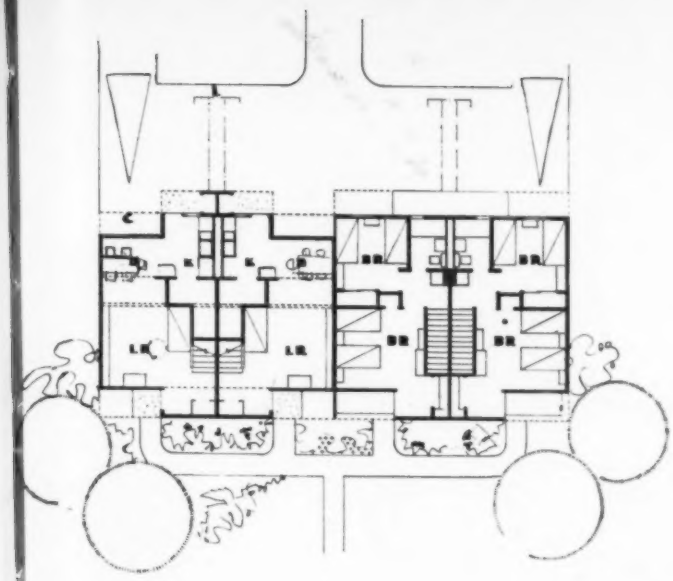
The front doors of the units face the garden side, the sea, and a "promenade walk" on which visitors can approach —but *don't* more often than not, the complainers say. Patios, and in some cases terracing, front the buildings.

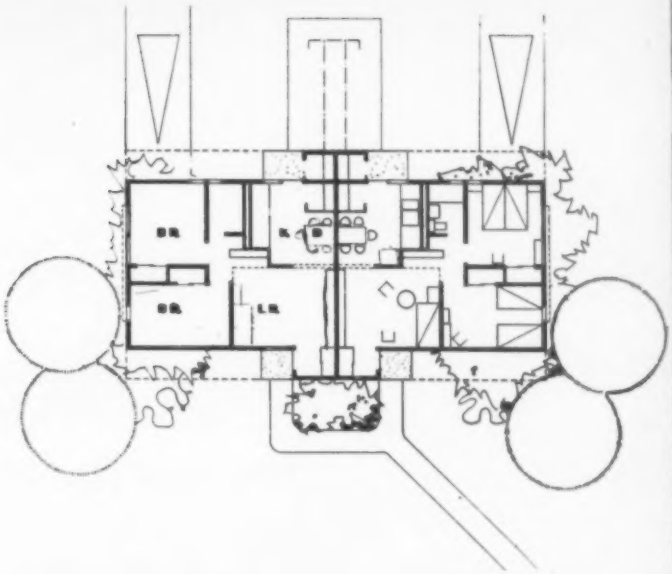
Richard Kraus, a first tenant of the project, in his book about the project, *In the City Was a Garden* (see September JOURNAL, page 323) says the interior plaster walls were then painted a warm terra cotta. "Joists of the gently sloped ceiling were exposed. One whole wall was taken up by sliding windows looking out on the patio . . ." In the kitchen and bath, two colors had been used in decorating.

Mr. Neutra's interest in the project went as far as the furnishings, for which he made "models" shown in the picture on page 347. His models were carefully designed to avoid use of critical war materials and to insure low costs.

Resident complaints about the lack of certain amenities and conveniences are laid mostly to wartime restrictions, although many of the same deficiencies prevail in public housing currently under construction: lack of sound insula-

(*Continued on page* 372)



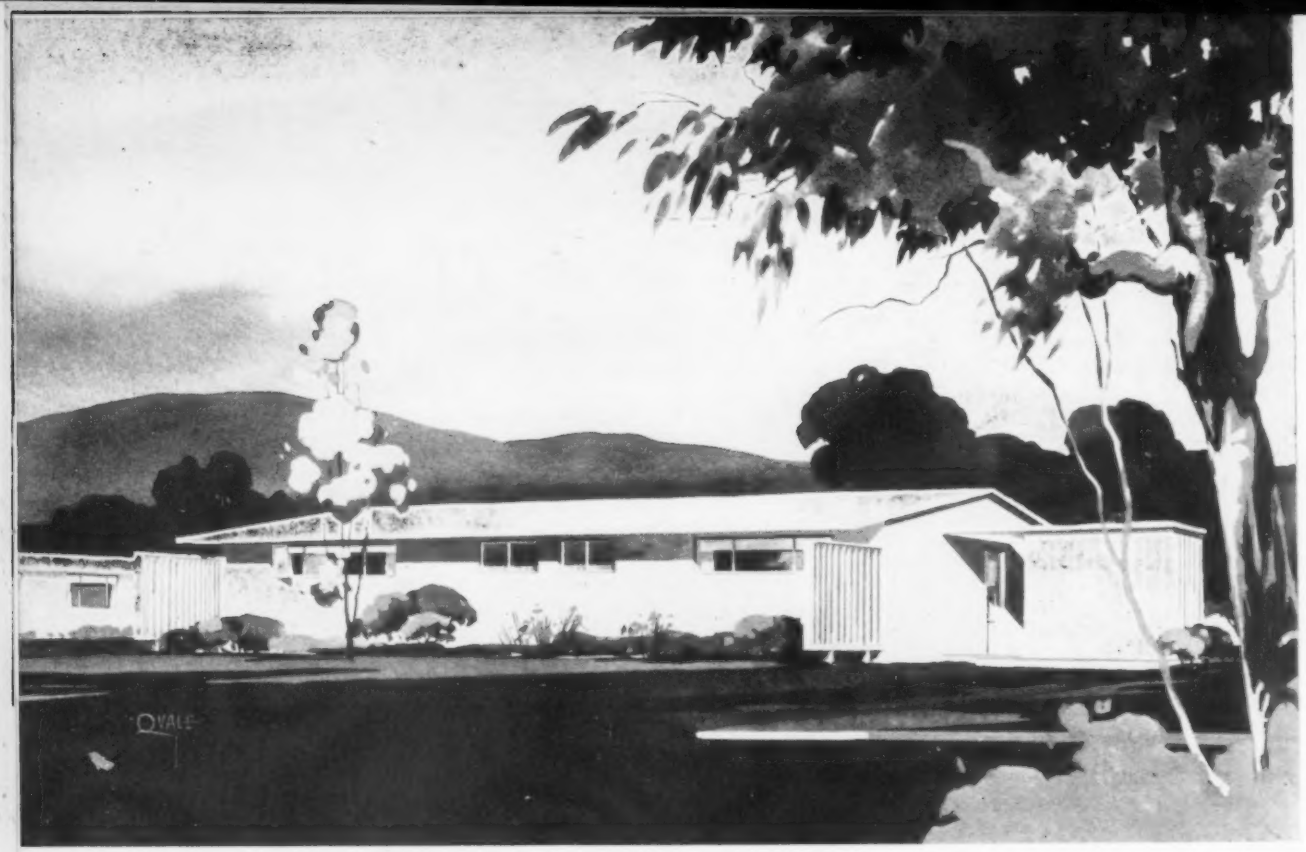


THE UNITS

60 one-bedroom
378 two-bedroom
162 three-bedroom

THE EQUIPMENT

Kitchen stoves—Caloric — not yet replaced
Refrigerators—Olympic ice-boxes—not yet replaced
Bathroom, kitchen, and laundry plumbing equipment — American Standard
Water heaters—originally U. S. Paper Jacket — being replaced with Pioneer and General Captain



COLONIA VILLAGE

Oxnard Project Shot From Gun

OXNARD HOUSING AUTHORITY

260 UNITS

HAROLD E. BURKET, Architect

ROBERT E. ALEXANDER, Consulting Architect

ECKBO, ROYSTON & WILLIAMS, Landscape Architects

THEY'RE shot from guns! Houses for Colonia Village in Oxnard, California are being built by a method brand new to public housing, known as Gunite construction. Two words, "pneumatic concrete," characterize the process. According to George R. Wallace, executive director of the Housing Authority of the City of Oxnard, it costs less to build, to insure, and to maintain structures raised by the Gunite method—three excellent reasons for choosing it for the 260 unit low-rent project.

Gunite is the trade name for a mixture of Portland cement

and lightweight aggregate, which is mixed dry, passed by compressed air through a rubber hose into a gun where it is hydrated, and then shot into place by pneumatic pressure. Pressure used is enough to consolidate the material into position and walls are built up simply by holding the gun at right angles to the surface and depositing the concrete in layers. Time for setting is allowed between layers and after a structure is complete it is kept dampened for about a week to cure it.

Machinery

Some of the equipment used in the process is shown in the picture, right. The complete machine includes a mixer, hopper centrifugal pneumatic pump, and generator. These parts, together with the hose and gun constitute the machinery necessary to apply Gunite. One of the most important parts is the gun itself, made by the Cement Gun Company of Allentown, Pennsylvania, which has in the nozzle eight jets that release water to hydrate the mixture just before it is shot, and which controls the flow of concrete. Forms of steel are used to anchor and reinforce the concrete as it is built up. (See picture, left.)

Project Construction

At Colonia Village Gunite is to be used for all exterior walls and interior partitions except for stud and plaster partitions between kitchens and baths. Floors will be of concrete slab and roofs will be built up.

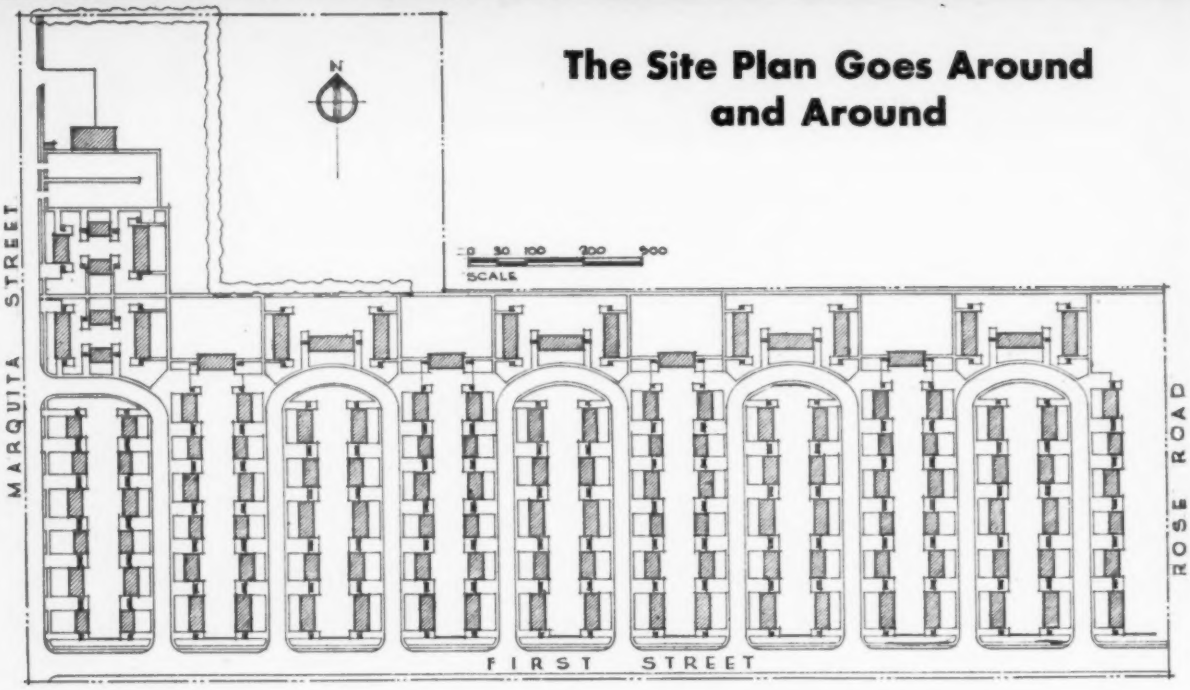
Ground was broken on July 30 and first occupancy is expected around April 1, 1952.

The Site

Houses are distributed along a series of U-shaped, cul-de-sac streets. The pattern that results from this plan tends to be a rather monotonous one and, further, is unalleviated by any changes in the external appearance of the buildings. They are, however, staggered in size, breaking somewhat the straight-line effect. Cul-de-sac streets offer the great advantages of safety, privacy, and ready access to the main street. Since living areas are oriented

Materials are mixed according to a strict formula and strict timing in the mixer shown in the equipment below. Dry mixed materials that are not used within 45 minutes of the time they are combined are discarded. Note the hose that carries the mix to the job.

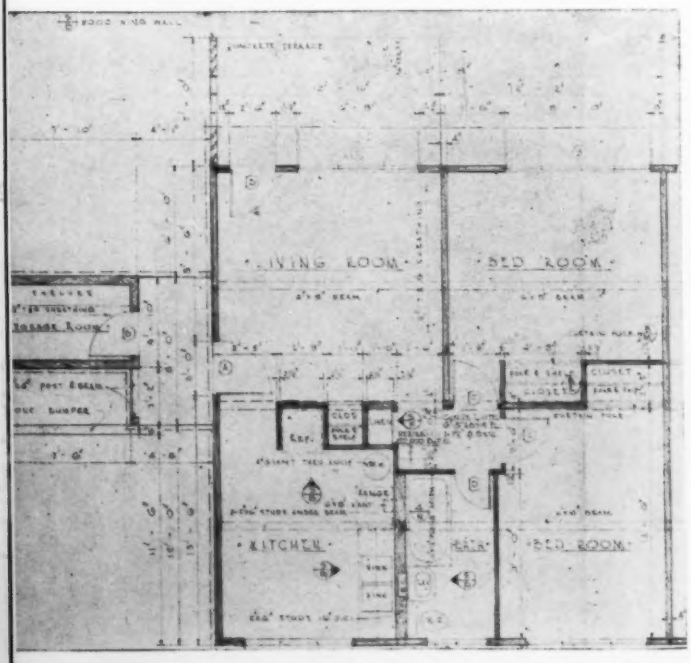
The Site Plan Goes Around and Around



away from the street, a good deal of the frontage might have been sacrificed and the houses situated nearer the street to allow for more generous terraces and landscaped areas. As they now stand, the buildings seem rather crowded. These details notwithstanding, however, the scheme is successful in providing privacy, a pleasant outlook, and controlled outdoor space for each unit.

A ten acre park adjoins the project and just north of the park is an elementary school that will serve the village children.

Total size of the site is 39.08 acres, of which 34.67 are developed. The 260 units planned for the project will be located in 130 duplex houses and there will be a combined management-maintenance building. Sixty of the units will have one bedroom, 96 will have two, 74 three, and 30 will have four. Density will be 7.47 families per acre.



Design

The units themselves are simple and direct and there is a generous use of glass in each room. Living rooms especially enjoy views of the landscaped, private areas.

A number of special features designed to insure a maximum of individual privacy for each unit have also been incorporated by the architects. Each unit has a completely fenced-in yard of its own, a paved parking space, separate storage building, paved laundry drying area, and an outdoor concrete terrace off of each living room. Play areas are located close by and the four-bedroom units especially will adjoin "totlots." Each unit is planned to use a minimum of space and embodies a compact, workable layout.

Each building is divided from its neighbor by a louvered baffle wall as one more assurance of privacy. These walls and the storage buildings are of redwood, furnishing a pleasant contrast with the Gunite houses—in both color and material.

Costs

Total construction cost is estimated at $1,934,000, making a per unit cost of $7438.46 and a room cost of $1339.33. These figures include all development costs with the exception of water mains and street lighting.

EQUIPMENT

Refrigerators—Servel
Heating—Holly space heaters
Plumbing—American Standard
Water heaters—Rheem
Floors—Matico asphalt tile

HARTFORD PARK

PROVIDENCE HOUSING AUTHORITY

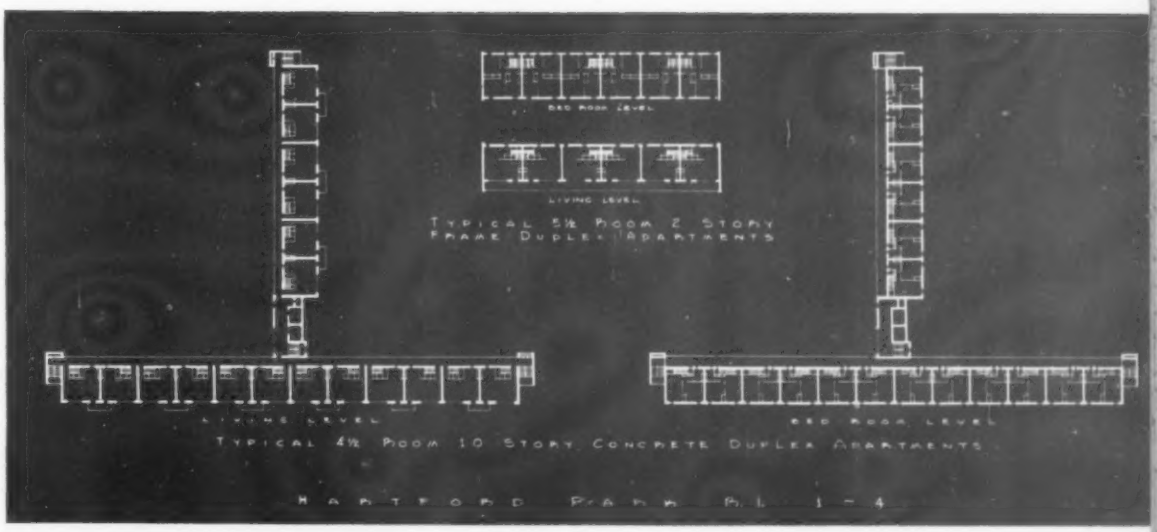
CREER, KENT, MATHER, CRUISE, AND ALDRICH, Architects

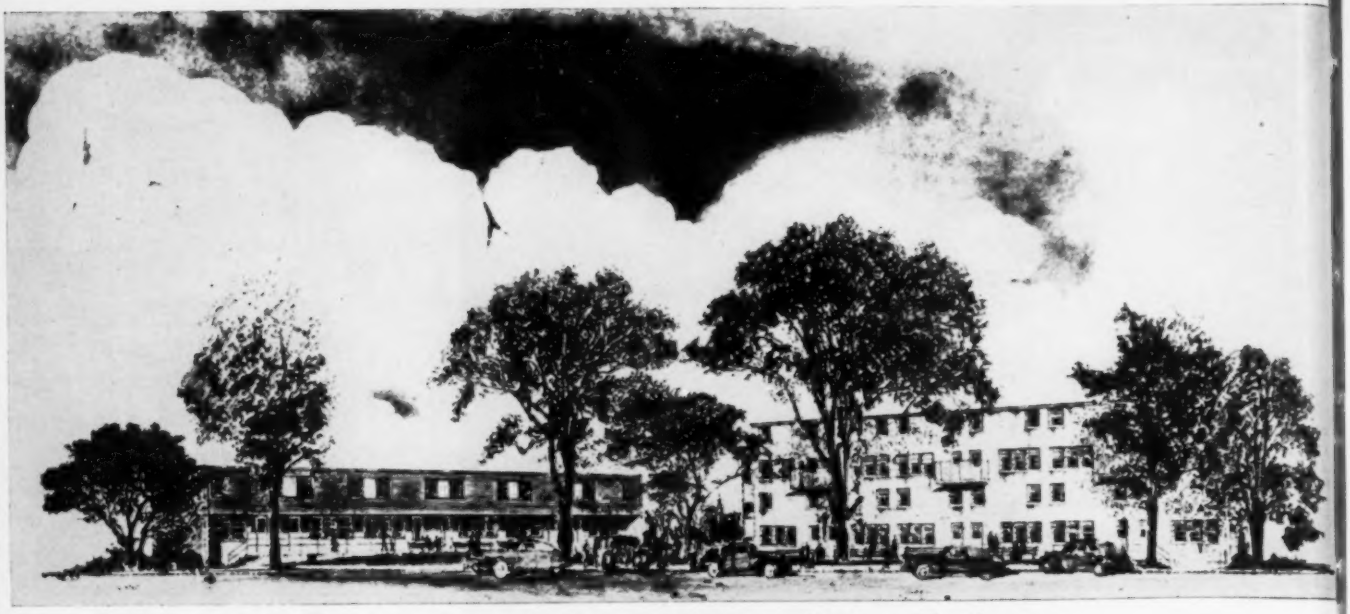
Providence – Modern Design Victory

JAMES D. GRAHAM, Landscape Architect

632 UNITS

FEDERALLY FINANCED


BED ROOM LEVEL
LIVING LEVEL
TYPICAL 5½ ROOM 2 STORY FRAME DUPLEX APARTMENTS
LIVING LEVEL
BED ROOM LEVEL
TYPICAL 4½ ROOM 10 STORY CONCRETE DUPLEX APARTMENTS
HARTFORD PARK PL 1 - 4



Balconies on the four-story structure, above, are like those on the ten-story buildings. They make possible small sitting areas for each pair of apartments. Through ventilation is a feature of all units.

TRADITIONAL Providence design—one-story houses and three-story walk-ups—went by the board when it came to designing Hartford Park, 632 unit low-rent project. Instead, architects used a variety of building heights and types and a "modern" building design—all of which they worked out with some verve.

High density was dictated by a scarcity of vacant land in the community and the city fathers' desire to locate a project in an area where houses had been torn down for a new expressway. Low site coverage was a must in a city that is used to open areas and shies away from solid blocks of tall apartment buildings.

The site itself, cut by steep slopes that reduce usable space, added to the architects' problems. However, by combining four ten-story buildings with nine four-story buildings and 28 two-story structures, they achieved a land coverage of only 11.8 per cent with a density of 24.25 families per acre.

The architects then set about to take the sting out of the "high-rise" buildings by widely separating them with the low buildings. Staggering the buildings on the site permits wide open spaces between the fronts of the structures and provides good orientation for light and air.

The "radical" design of Hartford Park at first met strong Public Housing Administration protests on grounds that it was too extravagant and that it *looked* too expensive and too good for low-rent families. However, after a year of delay caused by PHA objections, during which construction costs rose, the project was put out to bid—including all of the major design features for which the architects and the local authority had fought. Final bids on the project came to $2136 a room, within statutory limits for high cost areas.

Notable victories in the design include small balconies on ten- and four-story buildings, which PHA at one time threw out, and an extra lavatory in five-bedroom units designed for large families.

Of most interest designwise are the ten-story structures, all of which are "T" shaped. One such building, made up entirely of one-bedroom units, is for the exclusive use of older persons without children. The other three provide two- and three-bedroom duplex units—that is, living-dining-kitchen area on one floor; bedrooms on another.

Skip stop elevators in the duplex buildings service only the "living levels"; do not stop on "bedroom levels." The result is only four elevator stops in a ten-story building—the fourth, fifth, eighth, and ninth floors. Bedroom levels are located on the second and third floors, sixth and seventh floors, and the tenth floor. Part of the tenants walk up to the bedroom levels from the living levels; others go down to the bedroom levels. Advantages of the plan are not only the economies achieved by skip stop elevator service, but also noise reduction achieved by pairing bedroom floors.

Entrance to the living levels from the elevators is by galleries that run the length of each arm of the "T." Elevators,

EQUIPMENT

Bathroom plumbing—Kohler

Kitchen cabinets and sinks —Youngstown

Windows and screens—Truscon

Interior doors—Truscon

DEVELOPMENT COSTS

$12,922 per unit

$2136 per room

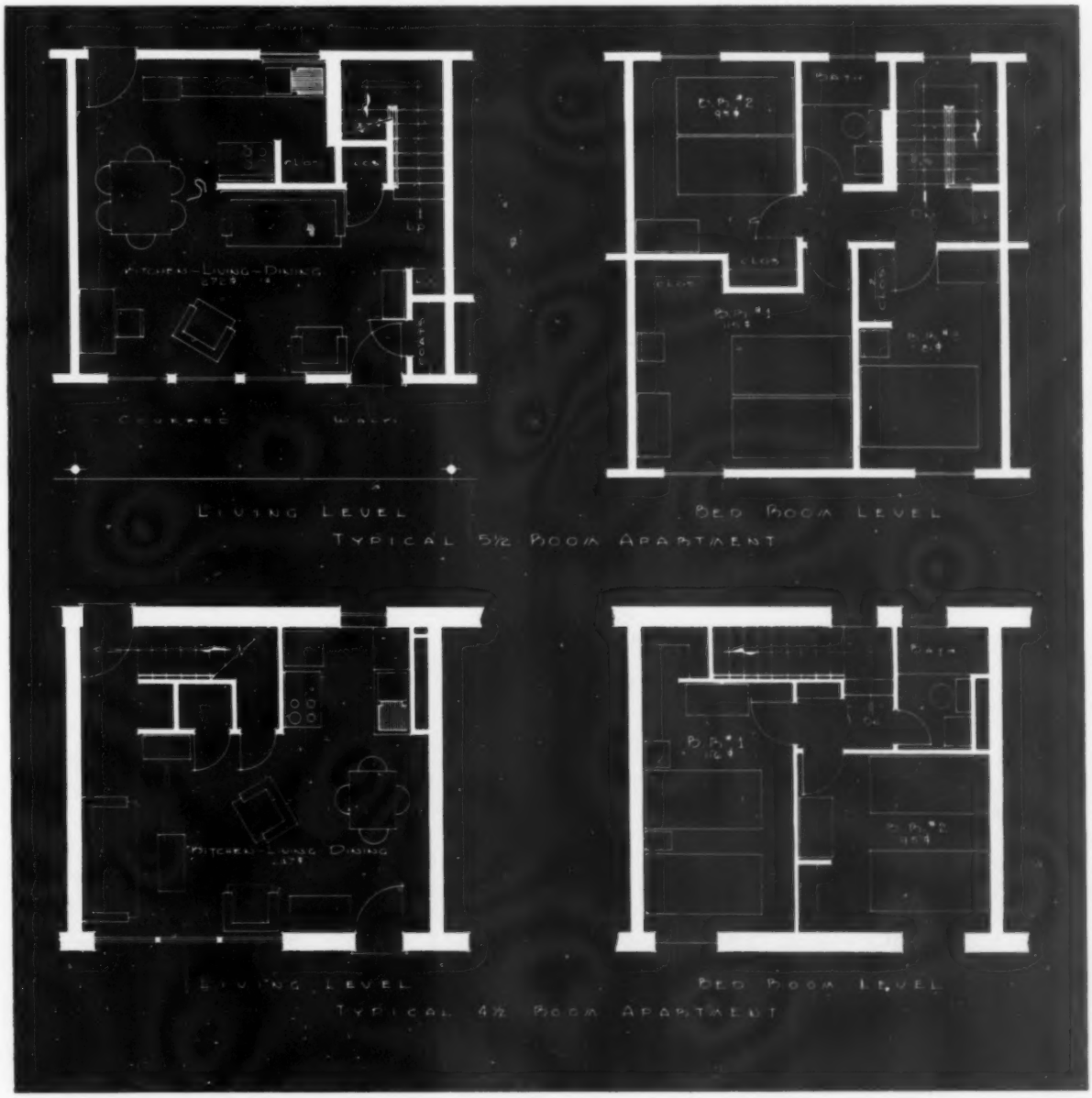
incinerators, and a stairway are located at the join of the "T" on living levels. Stairways are also located at each end of both arms. Although galleries also run along the bedroom levels, they do not provide access to other floors.

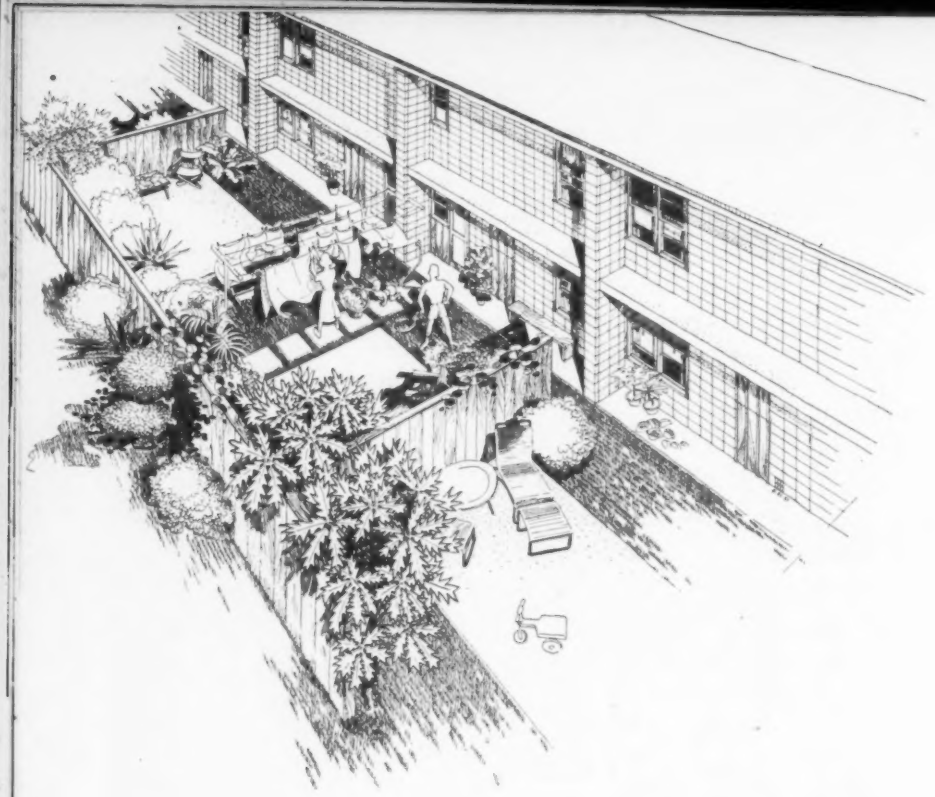
Floor plans for units in the four- and two-story buildings follow the same pattern as those in the ten-story structures. Two-story structures include three-, four-, and five-bedroom units, while all units in the four-story buildings have two bedrooms.

Exteriors of the ten- and four-story buildings are of reinforced concrete with reinforced concrete floors and bearing walls. Interior partitions are cinder block. Access galleries and balconies are of cantilevered reinforced concrete with the outside panels featuring integral coloring, adding to the eye appeal of the project.

Two-story buildings combine reinforced concrete slab for the first floor with conventional wood frame and plaster construction for the second floor.

Openness within units was accomplished by throwing the kitchen and living and dining areas into one space, which also reduced partition work. In the unit plans for the two-story structures shown below, note the front and back entrances with the easy access to the interior stairways from the entrances; the large amount of closet space, both upstairs and downstairs. Hallways are held to a minimum.





B. N. LEATHERS CENTER, II

CORPUS CHRISTI, TEXAS

RICHARD S. COLLEY, Architect

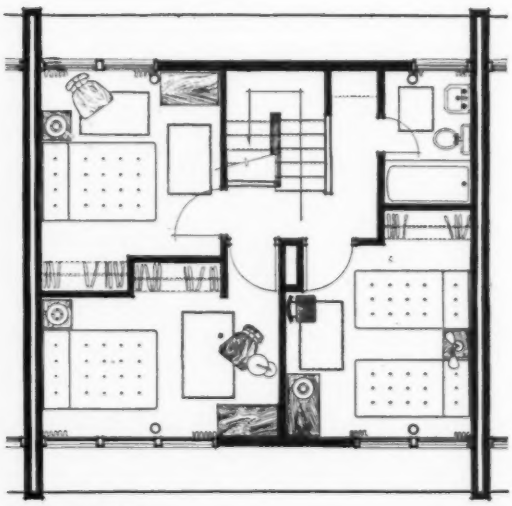
J. S. NAISMITH, Engineer

H. DURWARD THOMPSON, Landscape Architect

Raising the Roof – Lowering the Costs

CORPUS CHRISTI HOUSING AUTHORITY

FIRST FLOOR



SECOND FLOOR

THREE BEDROOM UNIT

THE METHOD CUTS COSTS

THE Youtz-Slick Lift Slab method of construction as carried out in the Corpus Christi project uses slab construction for roof, second floor, and foundation, all of which are poured at ground level. Roofs and second floor slabs are raised into position with hydraulic jacks. Savings are apparent:

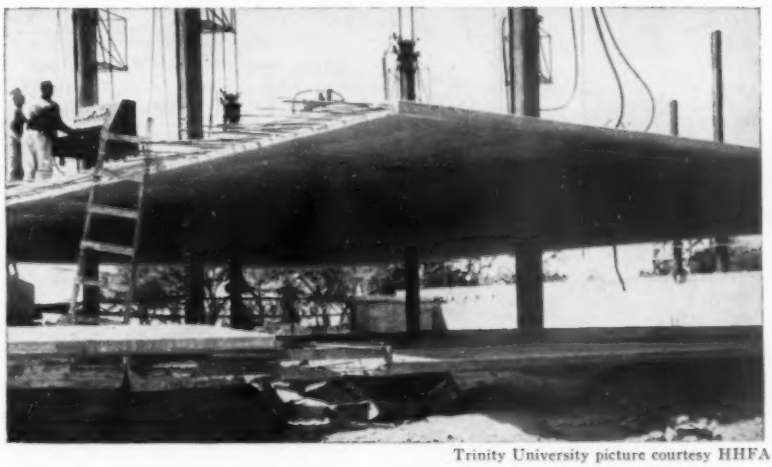
$1224 per room without equipment

$6293 per unit without equipment

$6.35 per square foot for reinforced concrete — an estimated saving of $2.50 to $3 per square foot

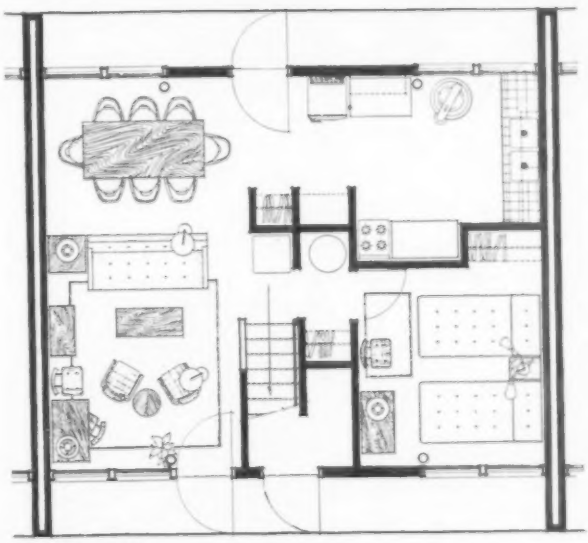
Estimated 30 per cent saving on labor for plumbing installation because 75 per cent of material was fabricated and set in when slabs were poured

Steel placed for about $15 a ton, compared with usual cost of $40 to $50



Trinity University picture courtesy HHFA

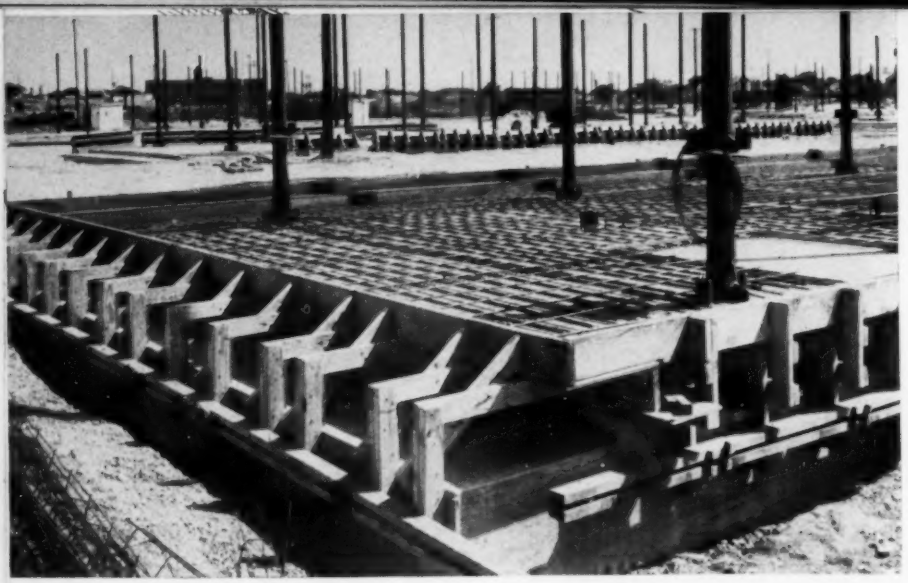
The picture at the left, taken at the time the method was first used at Trinity University, San Antonio, shows the "roof raising" process. Pictured on the following pages is the process as used in Corpus Christi—second time the patented process has been employed.



FIRST FLOOR

SECOND FLOOR

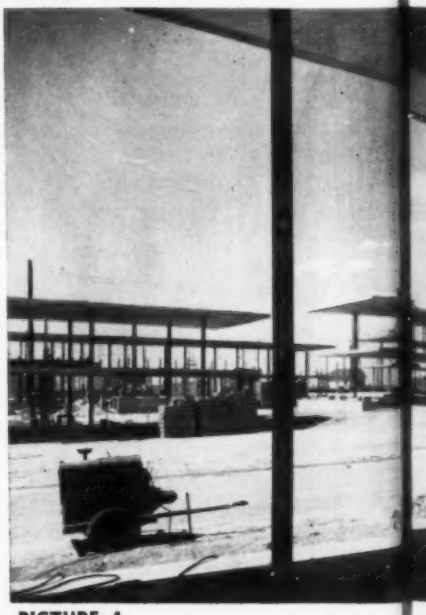
FOUR BEDROOM UNIT



PICTURE 1 ABOVE; PICTURE 2 BELOW

PICTURE 3

The "roof raising" Youtz-Slick Lift ess page. In picture 1, the reinforcing rods hav ced necessity for the costly type used in conven ior reinforcing rods have been covered with l ag the columns and that are used in the lifting g b picture 3, forms have been removed, rev lay is 6 inches thick, larger than the second floo i the roof has been raised in sections and s he place. Note the plumbing pipes already in th the second floor section ready to be raise s 5, hydraulic jacks attached to each of the co por lifting. The control panel coordinates the ll ess even. In picture 6, exterior walls of ck, are non-load bearing, are shown. Picture th



PICTURE 4

EQUIPMENT

Kitchen stoves—Acorn

Refrigerators—Servel

Kitchen sinks—American Standard

Bathroom plumbing equipment—American Standard

Heating—individually gas-fired space heaters—"Brilliant Fire"

Water heaters—Rheem

Screens—Tension-Tite

Door locks—Yale

Lift ess is illustrated by the photographs on this
have ed. Note the simple forms that eliminate the
nven orced concrete structures. In picture 2, the
ith l aggregate concrete. "Collars" that fit around
ting p be "poured" into the next concrete slab. In
reve ayers of slabs—the top, or roof slab, which
d floo inches thick, just beneath it. In picture 4,
nd s her and half of the second floor slab is in
dy in the raised second floor and the bathtub on
raise s done during the lifting process. In picture
he c porting the roof and second floor do the actual
the ll the columns and keeps the "raising"" proc-
of c k, which like separating walls between units
ture the decorative wood panels.

PICTURE 5 ABOVE; PICTURE 6 BELOW

THE SITE

17.46 acres; 14 families per net acre

Care was exercised in laying out the site, so that each building would face into the prevailing breeze and so that each unit would have access to a street.

The difficult site required spending $350,000, including electrical work, gas and water distribution systems, sewerage collection system, storm sewers, etc.

Driven piling foundations, which accounted for $15,000 of the construction expenditures, were necessary for five buildings because of the difficult site.

THE UNITS

200 in 44 buildings

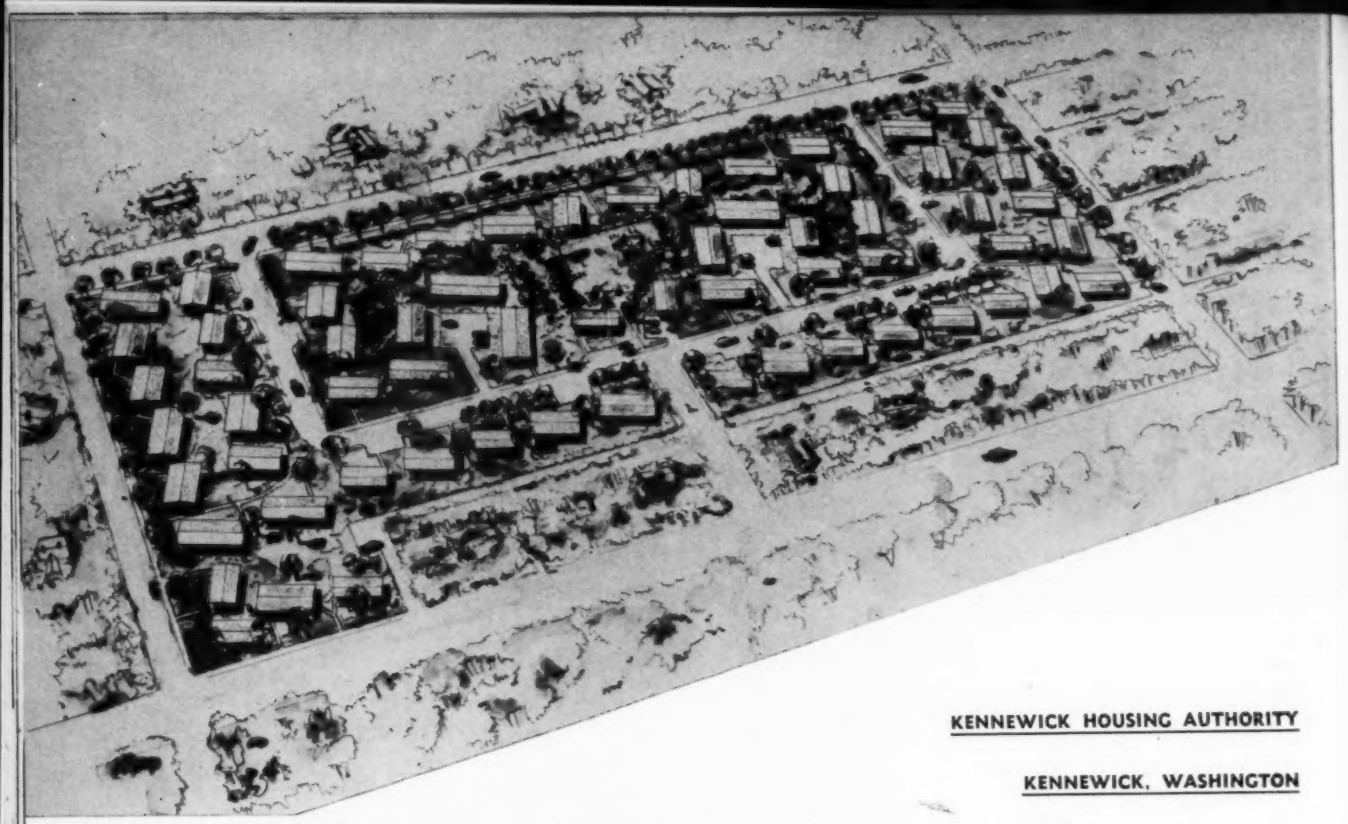
90 two-bedroom—784 square feet

92 three-bedroom—1138 square feet

18 four-bedroom—1221 square feet

The problem of storage for wheeled toys and large objects used infrequently was met by providing adequate storage space inside the units with doors that open directly to the out-of-doors.

Ground broken January 8, 1951. First five buildings ready for occupancy November 1951.



KENNEWICK HOUSING AUTHORITY

KENNEWICK, WASHINGTON

Sunnyslope – Imaginatively Planned

125 UNITS—FEDERALLY FINANCED

BASSETTI & MORSE, Architects

WENDELL H. LOVETT, Associate

ECKBO, ROYSTON & WILLIAMS,
Landscape Architects

MAXIMUM privacy plus an individual, single-family character was the target that architects for Sunnyslope Homes in Kennewick, Washington aimed at. Through a generous portion of imagination—in orienting the buildings and in the thoughtful use of plantings—they have created "accidental effects" on a simple rectangular site that could easily have been just another stereotype plan. First glance at the plan might indicate a run-of-the-mill layout—but a second look shows that each of the units in the one-story, duplex buildings has a private interior yard for clothes drying, garden, children's play, and family recreation. Large window areas face the garden side, offering plenty of light in the units and a large degree of privacy.

The gently sloping site of 14.3 acres was laid out with a minimum of regrading and each building was set at an angle to the site boundaries to orient for prevailing winds. A loop road provides a barrier to through traffic. Important in achieving a feeling of privacy and a lack of regimentation in the almost identical buildings, is the careful planning by the landscape architects. Shrubs and shade trees will define the yards and play areas and will serve to mitigate the warm climate. Public lawn areas have been kept to a minimum and the plants chosen will require little care, for the project is planned for tenant maintenance. A central play area for small children will be provided with a paved portion for wheel toys.

The buildings themselves, now under construction, are of pumice block and frame construction with low pitched roofs. There are no hung ceilings in the units, a fact that represents a considerable victory over the Public Housing Administration's usual insistence on truss design. Rather, the ceiling slopes up in conformance with slope of the roof construction, thereby creating a feeling of spaciousness in the interiors and

contributing to a better acoustical environment. Both of which advantages, the architects feel, are accompanied by a lowering of costs because of simplified construction.

Beam and Joist vs. Truss

After careful study, the architects found that to make each truss it takes 35 separate saw cuts, requires the handling of 20 separate pieces of wood, and demands driving 174 nails. The beam and joist system that Architects Bassetti and Morse used takes 2½ pieces of wood, three saw cuts, and 16 nails. On the basis of their study of the two systems, the architects said, "we came to the conclusion that we would be justified in fighting for the simpler system. Of course, we realize that the beam and joist system cannot be erected as rapidly by hand as the truss system can with the use of a crane. However, we feel that its inherent simplicity makes it a preferable system." Flat roofs, which would have been most economical, were discarded in deference to local building custom.

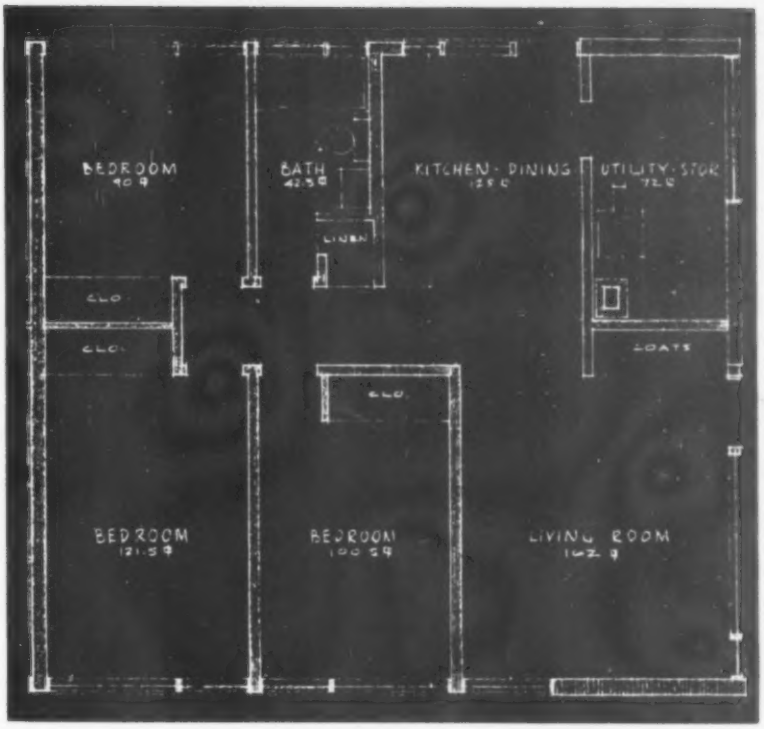
Floor plans for the 125 units of one-, two-, three-, and four-bedroom units perhaps lack the inspiration of the site arrangement. Combined kitchen, dining, and living room areas may well detract from a feeling of privacy within the units, although the arrangement is economical of space and offers maximum usability. Corridors have been kept to a minimum.

Low Costs

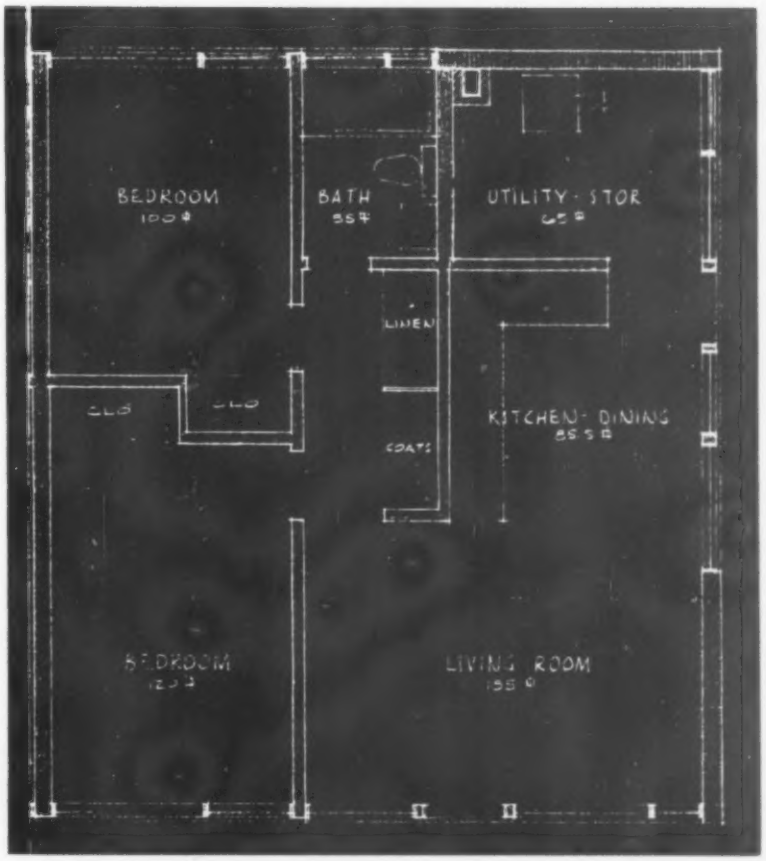
Economywise, the project can also be termed a success. Per unit costs including site acquisition, site improvements, and non-dwelling construction and equipment average $7250, or a room cost of $1540, achieved without sacrifice of space standards. One-bedroom units have 516 square feet; two-bedroom, 661 square feet; three-bedroom, 840 square feet; and four-bedroom, 1070 square feet. Total construction costs are about $140,000 below the original estimated cost—a saving, the architects feel, resulting from both site layout and building construction.

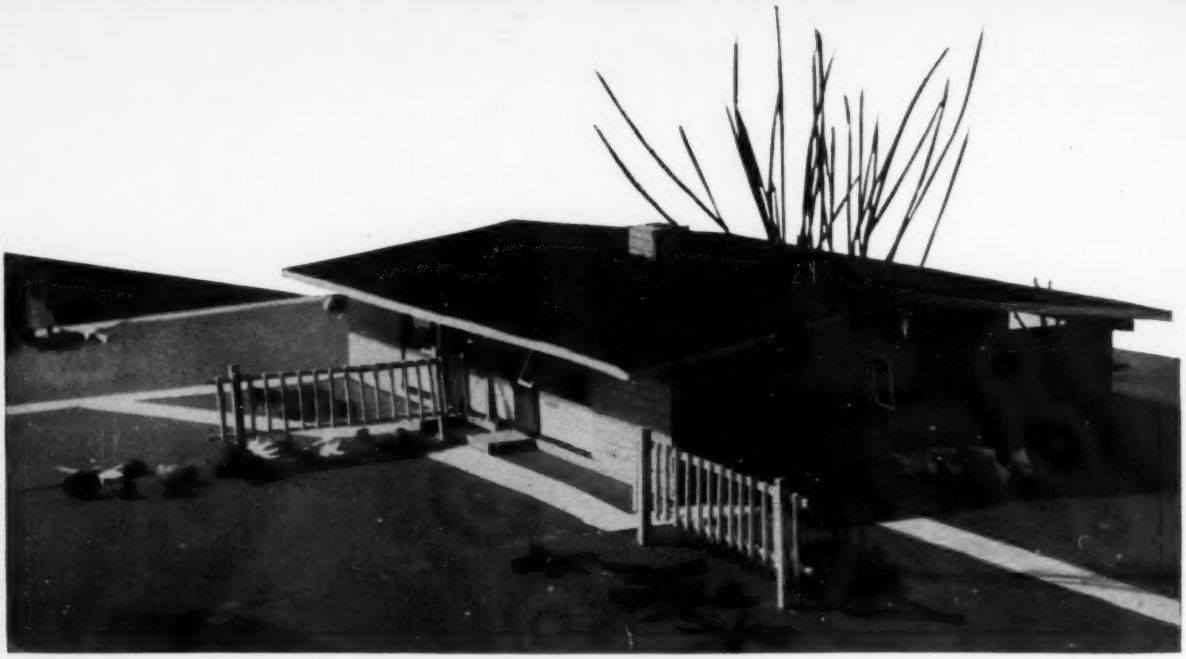
Cooperative Spirit

Success of the project is attributed by the architects to the housing authority and the understanding of the Seattle PHA field office: ". . . without the whole hearted cooperation and everlasting faith of the members of the authority and their executive director the realization of this project in its present form would have been impossible. . ."



TYPICAL FLOOR PLANS





THE UNITS

25 one-bedroom—516 square feet
56 two-bedroom—661 square feet
38 three-bedroom—840 square feet
6 four-bedroom—1070 square feet

THE SITE

14.3 acres
2.2 acres land coverage
9.5 families per net acre

THE EQUIPMENT

Heating plant—Heatlox
Kitchen stoves—Kelvinator
Refrigerators—Kelvinator
Bathroom plumbing—Briggs and Standard
Kitchen sink and cabinets—Youngstown
Insulation—Feltrok

ARMSTRONG COURT

GREENWICH, CONNECTICUT

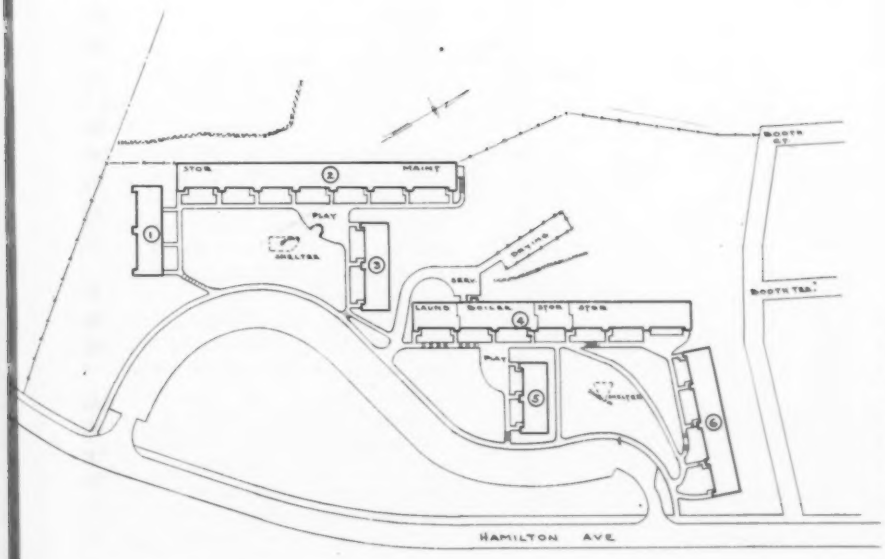
STATE FINANCED, MODERATE-RENT

GREENWICH HOUSING AUTHORITY

"Stilts" and "Staggers" on a Steep Site

HOLDEN, McLAUGHLIN & ASSOCIATES, Architects

JOSEPH WEIR, Associate Architect



ONE BUILDING on "stilts," several others of staggered heights, and recessed galleries on all structures of Greenwich's new moderate-rental project might at first glance appear to be only design innovations—but actually each represents a happy solution to knotty architectural problems—one of site and one of building design.

Architects Holden and McLaughlin,

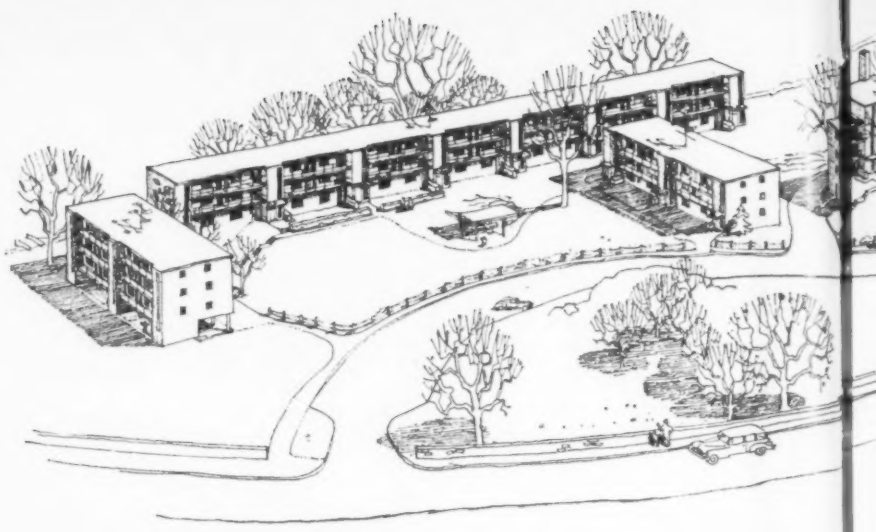
not content with a trite solution, worked out their plans to take *advantage* of the problems and by their ingenious methods, gave the project added amenities and architectural interest.

Site problem for the project centered around the steep incline of the 15 acre area—a 41-foot elevation in the southwest corner to an approximate 84-foot elevation in the northeast part of the site.

Crux of the unit design problem was the Connecticut legal requirement that all housing units—whether single family structures or in multi-unit buildings—have two means of egress.

Site difficulties were handled by "stilt" and "staggered" buildings. Building number 1, shown left in the site layout on page 361, is built on "stilts" some 7 feet high to prevent sewerage line back-ups in the building, which is situated at the lowest point of the site. The open area under the first floor has been black-topped and will serve as a play area for children in rainy weather. Sidewalks for the building pass through the open area under the building to the front doors.

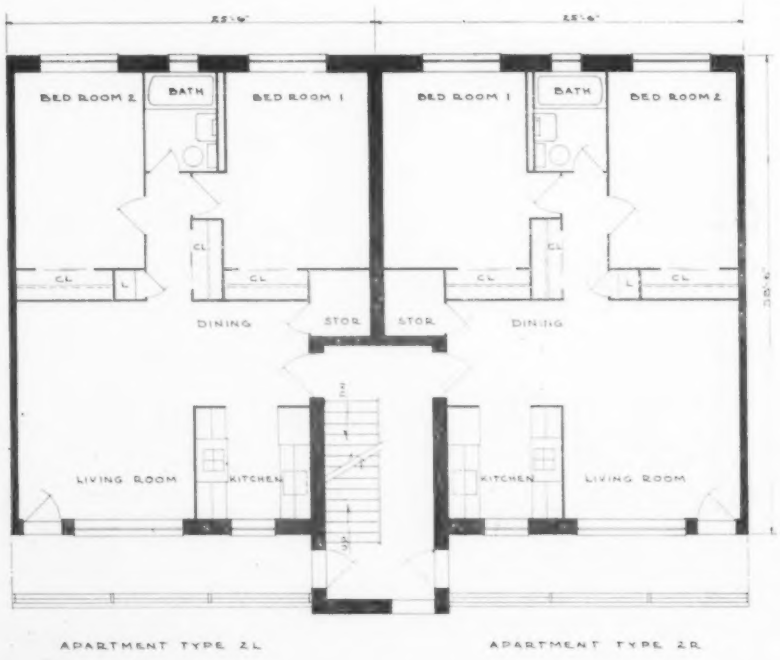
Architects of lesser imagination and skill might easily have overlooked the desirability of combining small units into one long staggered structure situated on the incline of the site, such as Mr. Holden and Mr. McLaughlin did with building number 4. The effect is height variation in the buildings that are actually all three-story walk-ups. Step-ups of the building are one story



in height, bringing the top floor of the lowest level even with the second floor of the next higher, and so on. Galleries give continuity to the four "sections." A similar method of staggering was used on the east end of building.

Recessed galleries, which run almost the length of each of the two upper floors of all the buildings, not only are a design feature that is architecturally attractive, but they also provide additional summer living space for tenants and—most important—are the means by which the architects solved the problem of two exits for each unit.

Each entranceway to the buildings encloses a stairway that serves the second and third floor apartments. Doors to the units lead directly off this stairwell hallway — providing the prime means of entrance and exit to all three floors. A second doorway from the living rooms of second and third floor units leads directly to the galleries fronting them. Galleries are connected with all stairways in each building by secondary doors leading off the stairwell hallways. This arrangement permits tenants to leave their apartments by one of two doors and to use any one of at least three stairways (since there are at least three stairways in every building) to get to the ground floor.



APARTMENT TYPE 2L APARTMENT TYPE 2R

Interiors of the buildings are laid out similarly. Buildings 1 and 3 are identical in layout, each floor having two two-bedroom and two three-bedroom units, with the three-bedroom units on the ends.

The two long buildings, 2 and 4, are also identical in layout: 12 two-bedroom and two three-bedroom units on each floor with the larger units on the ends of the structures. Building 5 contains two one-bedroom units on the ends of each floor and two bed-bedroom units in the center. Building 6 has six two-bedroom apartments on each floor and two one-bedroom units on the ends of each floor.

In total, the six buildings contain 144 units—12 of one bedroom; 108 with two bedrooms; and 24 with three bedrooms.

The "staggered" building contains the laundry facilities for the entire project, located in the section on the lowest level. Equipment includes ten coin operated automatic washers, two spinners, and two large gas dryers. Also included

Armstrong Court, which is named for Noel Armstrong, former chairman of the Greenwich authority, is partly occupied; will be fully occupied by mid-October.

COSTS

$11,113 per unit, including all construction, development, and land costs and gas ranges, which are furnished
$2721.55 per room

SITE DENSITY

15 acres gross
14 acres net
10 families per acre

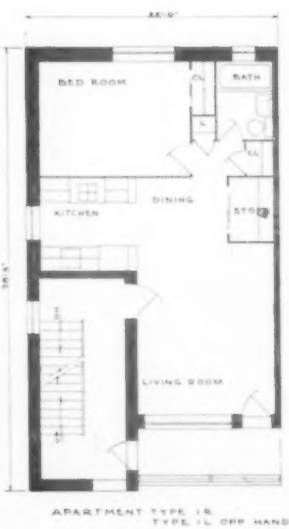
EQUIPMENT

Boilers—Pacific Steel Boiler
Burners—Petroleum Heat and Power
Controls—Minneapolis-Honeywell Regulator
Raditators—Fedders-Quigan
Balancing valves—Sarco
Pumps—Ingersoll-Rand
Bathroom plumbing—Kohler
Kitchen sink—Kohler
Built up roofing—Koppers
Windows and screens—Alwintite
Flooring—Armstrong Cork
Door locks and hardware—Norwalk Lock
Insulation—Infra Insulation

in the building are the central heating plant and the storage rooms for maintenance operations. Maintenance headquarters are in the north end of building 2. Master television antenna have been installed for each building.

Three slat-fenced drying areas, one just back of the laundry rooms, supplement the indoor drying facilities. Play areas are scattered throughout the project and two sheltered areas will be provided for outdoor sitting. To the rear of building 2, the housing authority is damming up a creek and dredging out a lake that can be used for skating in the winter time. No swimming will be permitted.

Exteriors of the buildings are brick on masonry. Floors are poured concrete covered with asphalt tile. Galleries have reinforced concrete floors and metal fencing and beams and columns under the "stilt" building are also of reinforced concrete.



APARTMENT TYPE 1R
TYPE 1L OPP HAND

APARTMENT TYPE 3L
TYPE 3R OPPOSITE HAND

BENTON HARBOR

HOUSING COMMISSION

94 UNITS

Designed for Livability

LEINWEBER, YAMASAKI & HELLMUTH, Architects

H. W. VAN DONGEN, Associate Architect

L. G. LENNARD, Landscape Architect

H. E. BEYSTER & ASSOCIATES, Engineers

OPERATING on the belief that "public housing should be—and can be—every bit as good as private housing that is subject to the same budgetary limitations," architects for Benton Harbor's first low-rent project designed their two-story row houses to provide all possible living space and the amenities of large garden areas with ample landscaping.

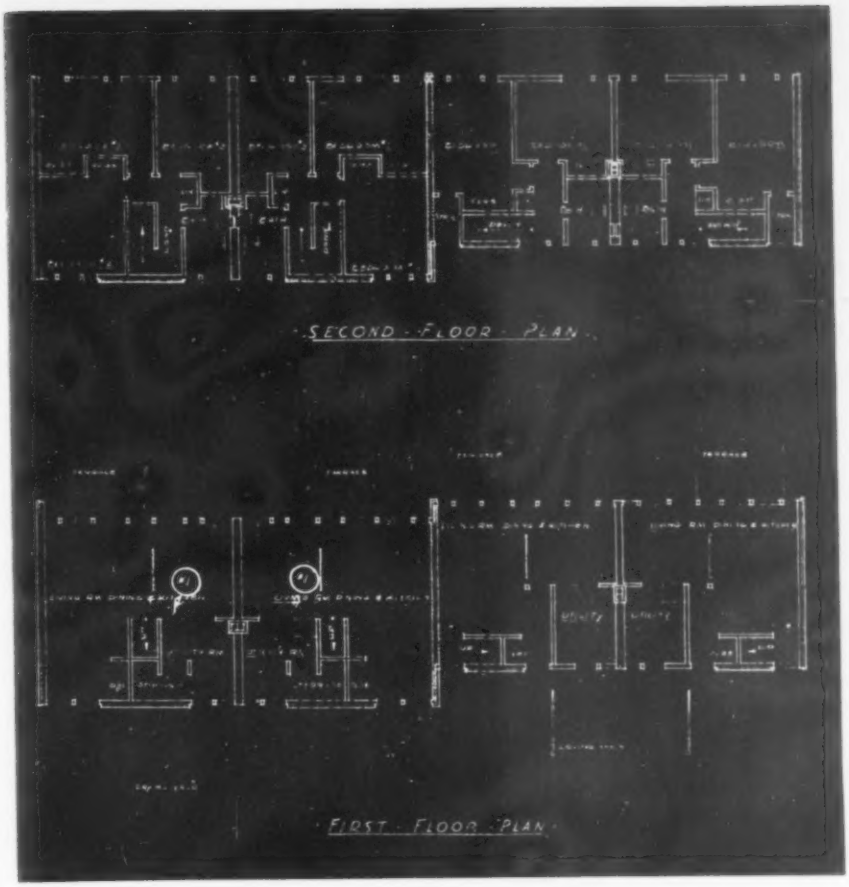
All houses are planned around service street and garden entrances. Living rooms are placed to face the terrace, permitting a pleasant view "through as much glass as was possible to install in each unit." Crux of the whole scheme are the cedarstake fences that enclose drying yards—one for every two units—on the service street side of the houses. By removing the drying function to the street side and putting it immediately outside the utility room, which opens onto the yard, the entire back area is reserved for terraces and gardens. Considerable attention has been paid to the landscaping, since living room areas will command a wide view of the garden side.

Interiors of each unit were planned to provide as much first floor space as possible. Living, dining, and kitchen areas, therefore, have been joined into a single room, with kitchen and living room divided by an expanded metal screen. The effect of this arrangement is to give a continuous space the depth of the house to the first floor, at the same time that the kitchen is adequately separated from the rest of the unit.

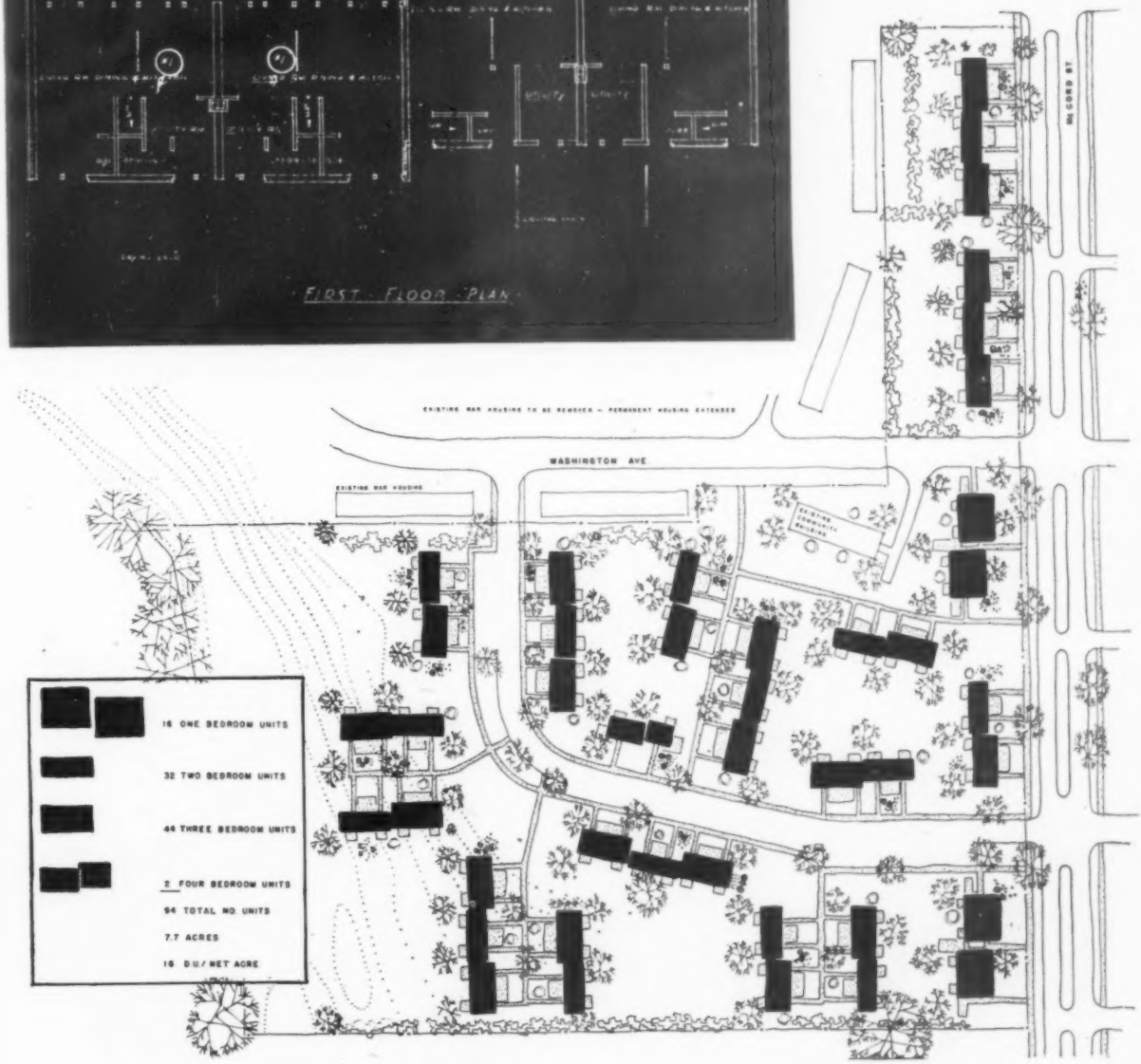
Exterior design aims to achieve a pleasant effect by contrasting pink brick end walls and panels, painted white wood siding, and doors and window panels of black, bright orange, primary blue, or primary yellow.

The Site

The 19 buildings on the irregularly shaped site of 7.7 acres have been distributed in no regular or formal pattern. Rather, they have been placed in rows or in groups of open courts—as the site dictates. To preserve the feeling of openness that characterizes the interior of the units and at the same time to give privacy, the buildings have been widely spaced on the site with large garden areas between the row houses. Where it was necessary to put two buildings close to one another, the architects took care to see that the street sides of the units were close—not the garden sides. Only one main street runs through the project and it curves in such a way and is connected with service drives in such a manner that no unit is far from the main road.



Gross space standards are about average for present-day low-rent projects; one-bedroom units, 560 square feet; two-bedroom, 768 square feet; three-bedroom, 922 square feet; four-bedroom, 1106 square feet.



"Front" view of a completed building is shown above (the same view that appears on the cover). Wherever possible, the units have been oriented east, west, and south on the garden, or "front" side. Below is a street view of a row building. Fenced drying areas, as shown in the model on page 364, will enclose a portion of the "back" yards that front on the street.

All this livability and sheer usefulness was not achieved without a struggle. Original plans for the project were attacked as being too expensive, too "swanky," too good for public housing. Use of so much glass to provide wide views of the garden side was condemned, partly on the ground that maintenance expenses would be too great and in part out of fear of public reaction. Most of the arguments appear to have been based actually in prejudice against modern design and construction methods.

It took the firm conviction and concerted efforts of the then mayor of Benton Harbor, Leon Gideon; the housing authority commissioners, who were unanimous in their support of the design; the PHA field office; and the PHA Architects' Advisory Committee, represented by William W. Wurster, to finally gain acceptance for the plans.

By judicious compromising, which enabled the original concept to be spared, the defenders won the day. Several units were added to the original number, length of interior roadways was somewhat reduced, some of the glass in living rooms was omitted, and the plans for the four-bedroom units were changed—all with the view and final result of reducing the unit cost.

End product of the struggle is a project that Benton Harbor is justly proud of and that it is expected will be one of the most livable housing projects in that part of the country.

Construction, Equipment

Frame construction has been used throughout the project, with a masonry fire wall for every two units. Roofs are built up and over hung; roofing material is Ruberoid. Other equipment includes plumbing in bathrooms and kitchen sinks by Crane; Fenestra windows and screens; Fiberglas insulation; Jackson and Church individual gas fired furnaces; kitchen ranges furnished by the A and B Stove Company; Frigidaire refrigerators; Handley-Brown water heaters; door locks and hardware by Russell and Erwin.

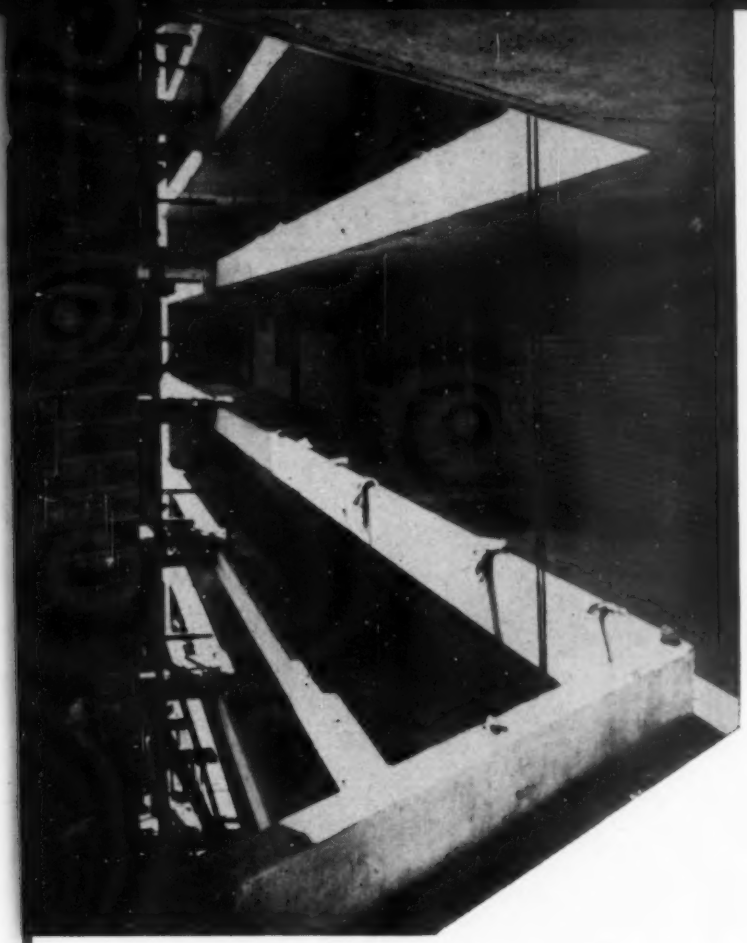
Density—Composition—Costs

Total site size is 7.7 acres; net density is 16 families per acre.

The 94 units are divided into 16 one-bedroom, 32 two-bedroom, 44 three-bedroom, and 2 four-bedroom units.

Construction costs including dwelling equipment and a 5 per cent contingency allowance amounted to $8305 per unit, or $1716 per room. These figures, however, do not include the cost of land, site improvements, planning, and non-dwelling equipment.

Ground for the project was broken on January 4, 1951 and it is expected to be ready for initial occupancy in October of this year.



LOOMIS COURTS

CHICAGO HOUSING AUTHORITY

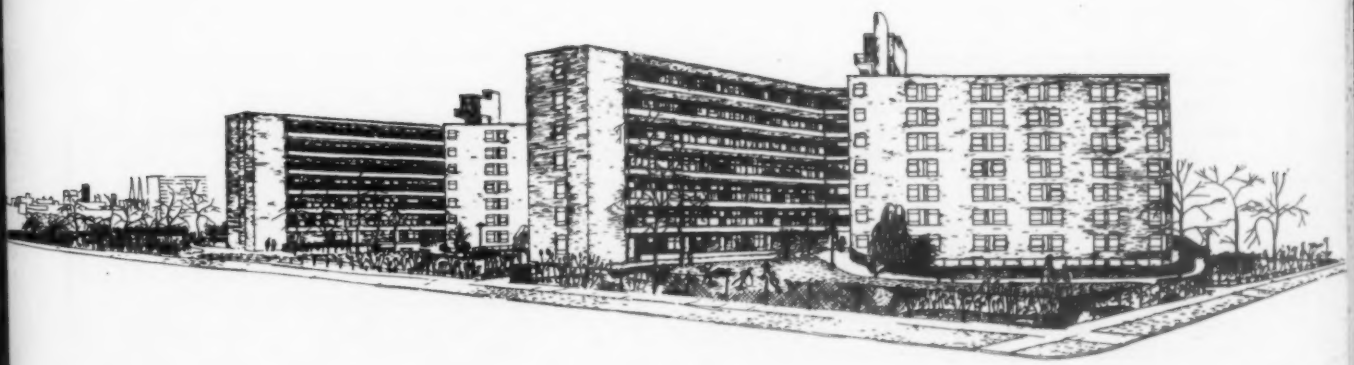
STATE AIDED RELOCATION PROJECT

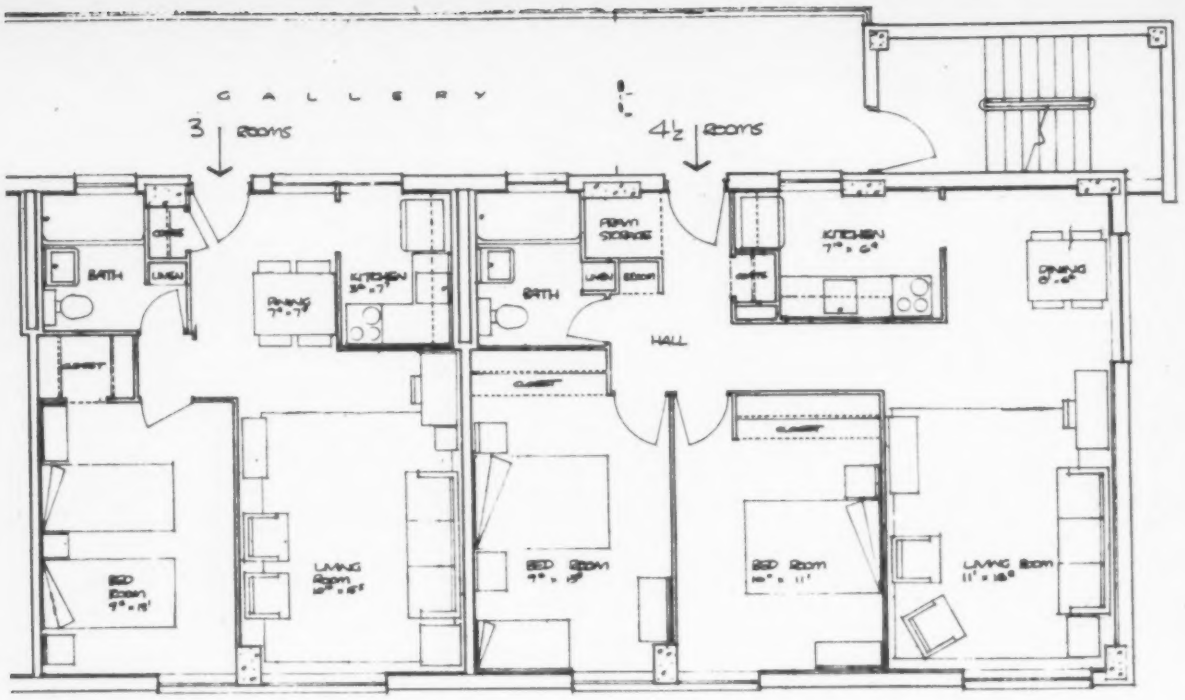
126 UNITS

Experiment in Multi-Story Housing

LOEWENBERG & LOEWENBERG, Architects

WEESE & VAN DER MEULEN,
Associate Architects





"THE AMERICAN family still likes its controlled plot of ground where a mother can keep her eye on the children: no family enjoys an elevator per se."

These words of William W. Wurster sum up the objections to multi-story apartment living. Nevertheless, the Chicago Housing Authority, forced by the high cost of slum land and the high densities such costs make necessary, has entered the high-rise field with a series of low-rent projects. In taking this step, CHA has had the courage to experiment with a number of plans directed toward solving the problems inherent in elevator buildings for housing projects, while keeping the densities they allow. Its method was to distribute design contracts for the several projects among a number of Chicago architects, giving them a largely free hand.

Julian Whittlesey, evaluating some of the resulting plans in a recent issue of *Progressive Architecture*, summarizes the drawbacks of elevator buildings that the Chicago architects had to deal with as follows: "Architects are generally conscious of the social drawbacks of the multi-story project in having deprived the tenant of freedoms and facilities more easily provided by row housing. Privacy of the tenant's quarters and of his storage, his easier contact with the out-of-doors for sitting out . . . for easier supervision of his children and their play . . . are attributes of the low-density walk-up projects. These and many other things contribute to a fuller family and neighborhood life. . ."

Mr. Whittlesey also notes other problems connected with high-rise buildings: the difficulty of designing to give every apartment cross ventilation, privacy, and sunlight, and the ungainly structures that result if necessary densities are to be achieved.

Chicago's attempt has been to rethink the entire field. Need for a number of relocation projects to house people displaced by several slum clearance, highway, and redevelopment projects has given the housing authority its opportunity to do so. State and city funds are financing the program under legislation and administrative procedures that are more or less "wide open" as far as limitations on room or unit costs are concerned. Further, eligibility for such housing is not confined to certain types of families—purpose being to rehouse *all* types of families displaced from clearance areas. Hence, the authority has been able to consider different types of projects to meet different types of family needs: those of single people and older childless couples, at one end of the scale, and, at the other, those of families with large numbers of children. Thus the architects of the eight projects in the authority's relocation program have each worked to some-

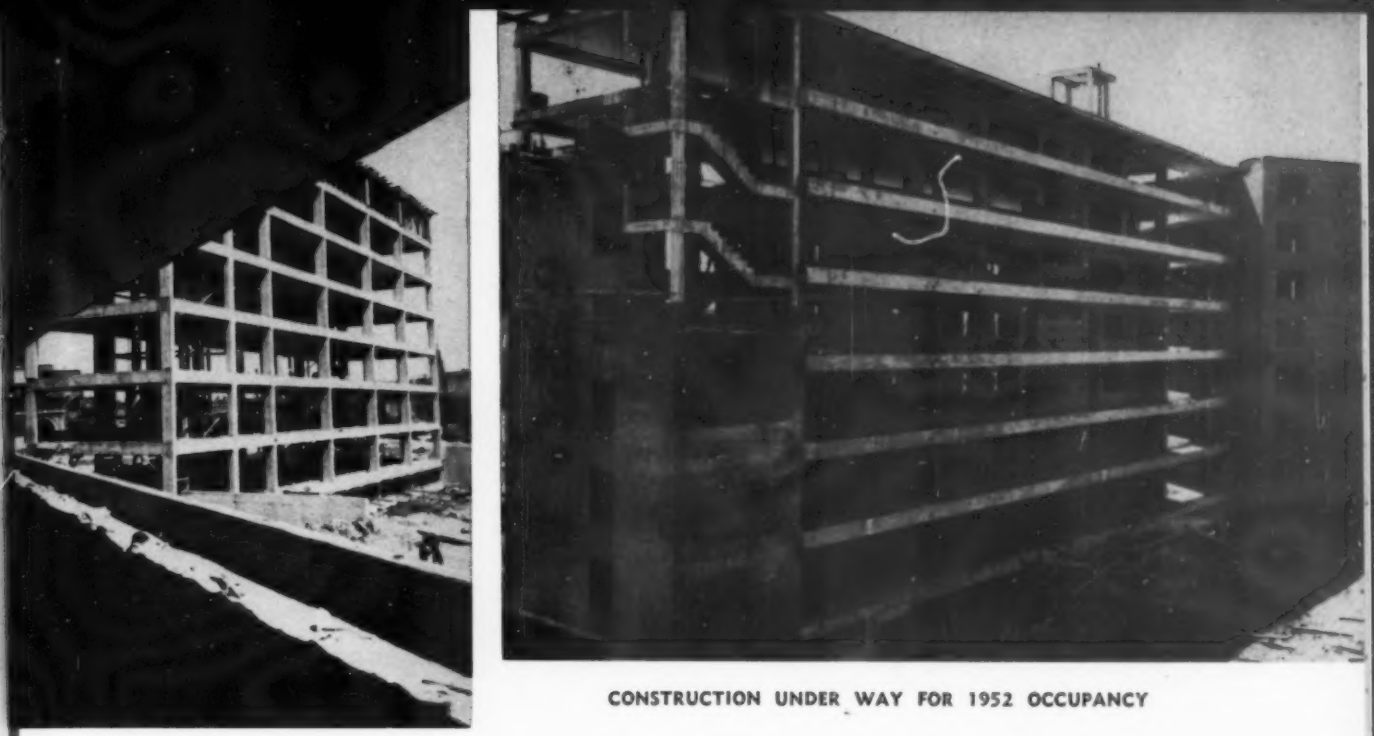
FACTS: SIZE, DENSITY, COMPOSITION, COSTS

Facts on the site and buildings are as follows. Net acreage is 3.64 acres, having a density of 34.6 families per acre.

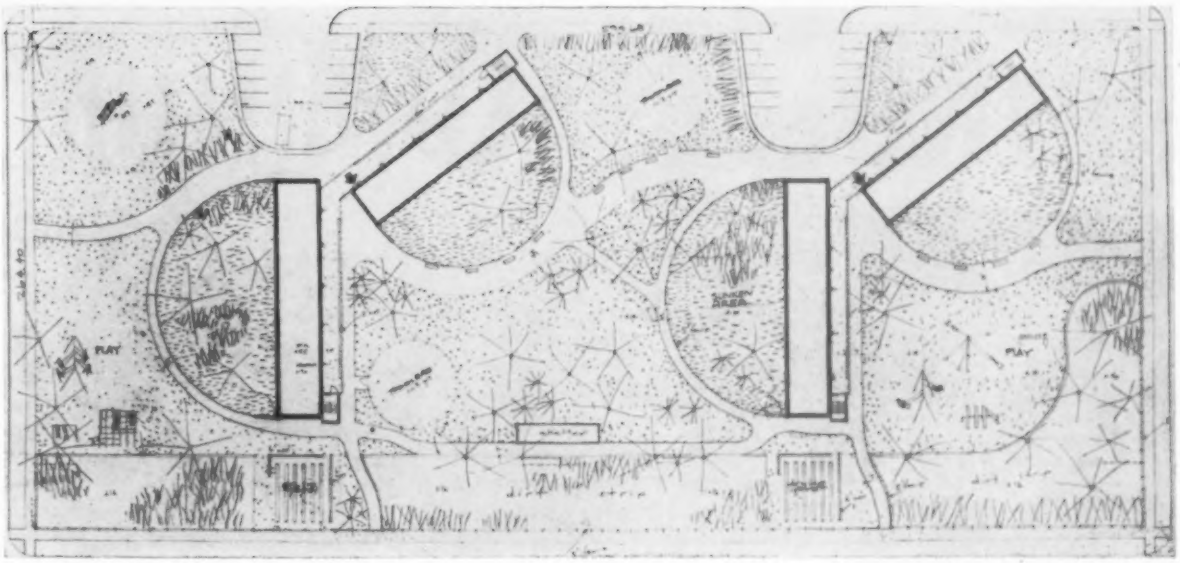
There are in all 126 units, of which 42 have 4½ rooms and 84 have 3½. Rooms average 251 gross square feet each.

Construction on the buildings started on September 7, 1950 and first occupancy is expected during the second quarter of 1952.

Total development cost, including everything, is estimated at $1,703,840, which figure means a per unit cost of $13,523 and per room cost of $3528.



CONSTRUCTION UNDER WAY FOR 1952 OCCUPANCY



what different specifications as far as family needs are concerned.

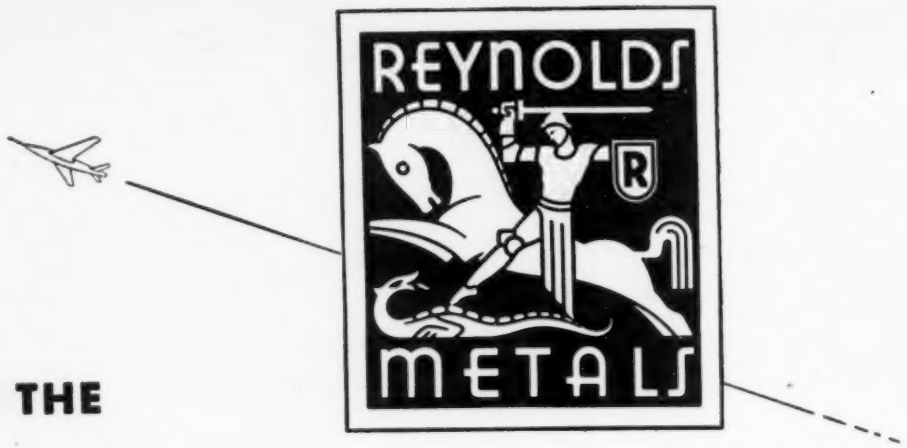
As these projects emerged, it became apparent that the solution to the difficulties of high-rise buildings was evolving into one form or another of a gallery type building. Of the uses for the gallery idea, Mr. Whittlesey has the following to say:

"In the high-rise building, the majority of families will be over two floors from the ground and the gallery may well be expected to come into its own as a balcony. 'Sidewalks in the air' is a favorable four-word summary if it doesn't remind you of the wrong kind of sidewalk. But if you can recall a dead-end street limited to half a dozen families all living on one side of it, you are reminded of the pleasant uses to which a sidewalk may be put. There are no people from above having to use the patch in front of your door, and few from beyond having to pass across it."

Of the several projects with one form or another of the gallery plan, Mr. Whittlesey says, ". . . Loomis Courts has, to my mind, best exploited the advantages of the gallery idea, both as to building and site."

Loomis Courts consists of two buildings, each designed in the form of two rectangular wings set obliquely to one another. Galleries 8 feet wide run along one face of one wing, then cross over and finish their course along the opposite face of the other wing. This continuous length of the galleries serves to join the two sections into one building.

(*Continued on page* 380)



IN THE CRUSADING SPIRIT OF MODERN HOUSING...

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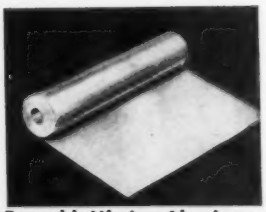

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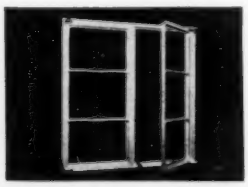

Reynolds *Lifetime* Aluminum Gutters are shown, left, in Ogee and Half-Round styles. Smooth or stippled finish. **Reynolds Aluminum Residential Casement Windows,** right, are outstanding for design and finish. Flash-welded corners assure greater rigidity and weathertightness.

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4 Easy Steps

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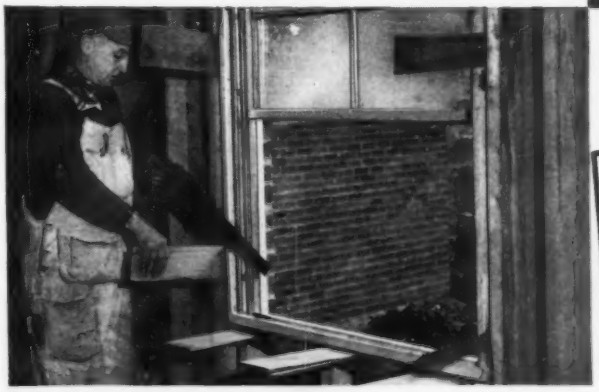
3 Nail *through* the highest shim at each side of window.



2 Square the frame and shim at these 7 places. Saw off shims flush with frame.

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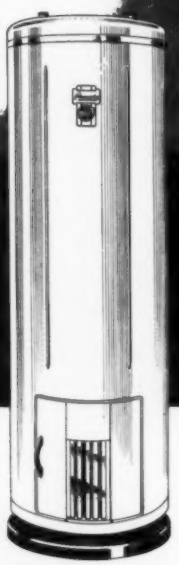

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Permaglas resists all corrosive waters and remains lastingly free from tank rust . . . gives long, trouble-free service.

Mass-production economies, achieved by A. O. Smith in building more than a million water heaters, provide savings that mean *Permaglas* costs no more than ordinary water heaters.

Permaglas is the First and Only glass-surfaced steel water heater available for any housing need in LP-Gas, Gas or Electric, 20- to 80-gallon sizes, AGA and UL Approved.

Write A. O. Smith Corp., Dept. JH-1051, Kankakee, Ill., for all the facts.

A.O.Smith
AUTOMATIC WATER HEATERS

Chicago 4 • Houston 2 • Los Angeles 12 • New York 17

Permaglas costs no more THAN ORDINARY WATER HEATERS

CHANNEL HEIGHTS—

(*Continued from page* 346)

tion, of adequate cupboard and counter space, of sufficient clotheslines, and of parking facilities for guests. Dark asphalt tile flooring, installed because it is cheaper than light colors, is another source of grief to tenants.

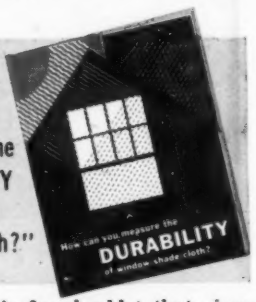
An achievement worthy of note was Mr. Neutra's success in getting doors on closets, an amenity lacking in almost all old and new public housing—and a usual source of complaint among project tenants everywhere.

Mr. Neutra, commenting upon some of the tenant criticisms, points out that the architect "is only the co-author" and that official standards and directives, "perhaps conflicting with his own desires, are as instrumental as the architect's design motives in giving ultimate shape to a project of this character."

Evidence that the tenants' complaints are little more than average housewives' protests against almost any design, are found in the strong bid that wartime residents of the projects made for mutual ownership. Although the plan for cooperative ownership was never realized, many of the more than 600 wartime residents apparently considered Channel Heights a real "home."

FREE! New booklet that helps you save money in selecting window shades

"How can you measure the DURABILITY of window shade cloth?"



Send for this free booklet that gives housing officials valuable information in specifying "Tontine"* window shade cloth. It's yours for the asking. Just write E. I. du Pont de Nemours & Co. (Inc.), "Tontine" Sales, Dept. 201, Newburgh, N. Y.

*"Tontine" is Du Pont's registered trade mark for its washable window shade cloth.

DU PONT TONTINE®
washable window shade cloth looks better longer

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Better Things for Better Living . . . through Chemistry

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Low Cost Replacement Swing Spout and Base Assembly

The finest swivel connection on the market today. Available to fit any and all type faucets.

Elano offers HOUSING a unique MONEY SAVING direct factory service on precision made replacement parts, such as faucet and valve stems, packing caps, seats, handles, spouts, strainers, and many, many others for all makes.

Have your maintenance department write for details or send samples of parts needed.

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*SILASEAL OUTSIDE
STOPS MOISTURE INSIDE

for above-grade exteriors
STONE • MASONRY • BRICK •

*SILICONE-BASE WATER-REPELLENT

SILASEAL is the modern transparent "one-coat" waterproofing method utilizing the amazing water repellency of silicones. Contains no oils or waxes . . . gives lasting protection while preserving natural appearance.

Write Today For Silaseal Sample and Specifications

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16803 EUCLID AVE. • CLEVELAND 12, OHIO

IN PERFECT Balance

IS THE PERFECT SASH BALANCE
for double hung windows

Unique Balances are specified by building specialists everywhere. Architects, contractors, housing officials, millwork retailers and manufacturers know the importance of a *perfectly balanced* sash . . . one that cannot creep up or down, yet can be raised or lowered easily. They know the *proven leadership* of Unique Sash Balances. More than 100 million in world-wide use since 1930 proves the performance of this true counterbalance.

Expert coordination and precision mark the graceful ballerina. *Perfect balance* is vital to her stage success.

NO MAINTENANCE

Years of use and Test No. 2295 of Columbia Testing Laboratories clearly prove that Unique Balances are designed and built with permanent strength and will not lose their lifting power for the lifetime of the sash. Rust and corrosion proof, *their first cost is their last* . . . they present no maintenance problem at any time.

WHY?

The secret of balancing a sash perfectly is controlling accurately the lifting power of the spring. In Unique Balances and *only* in Unique Balances, this control is permanently assured by the accelerated spiral rod. Specify Unique Balances and be certain of a perfectly balanced, trouble-free, maintenance-free window sash.

the Perfect Sash Balance

Over 100 million in use throughout the world

UNIQUE BALANCE CO., INC.
25 Bruckner Blvd., Dept. JH-10
New York 54, N.Y.

Please send me detailed information on Unique Balances.

Name_____ Firm_____

Address_____

City_____ State_____

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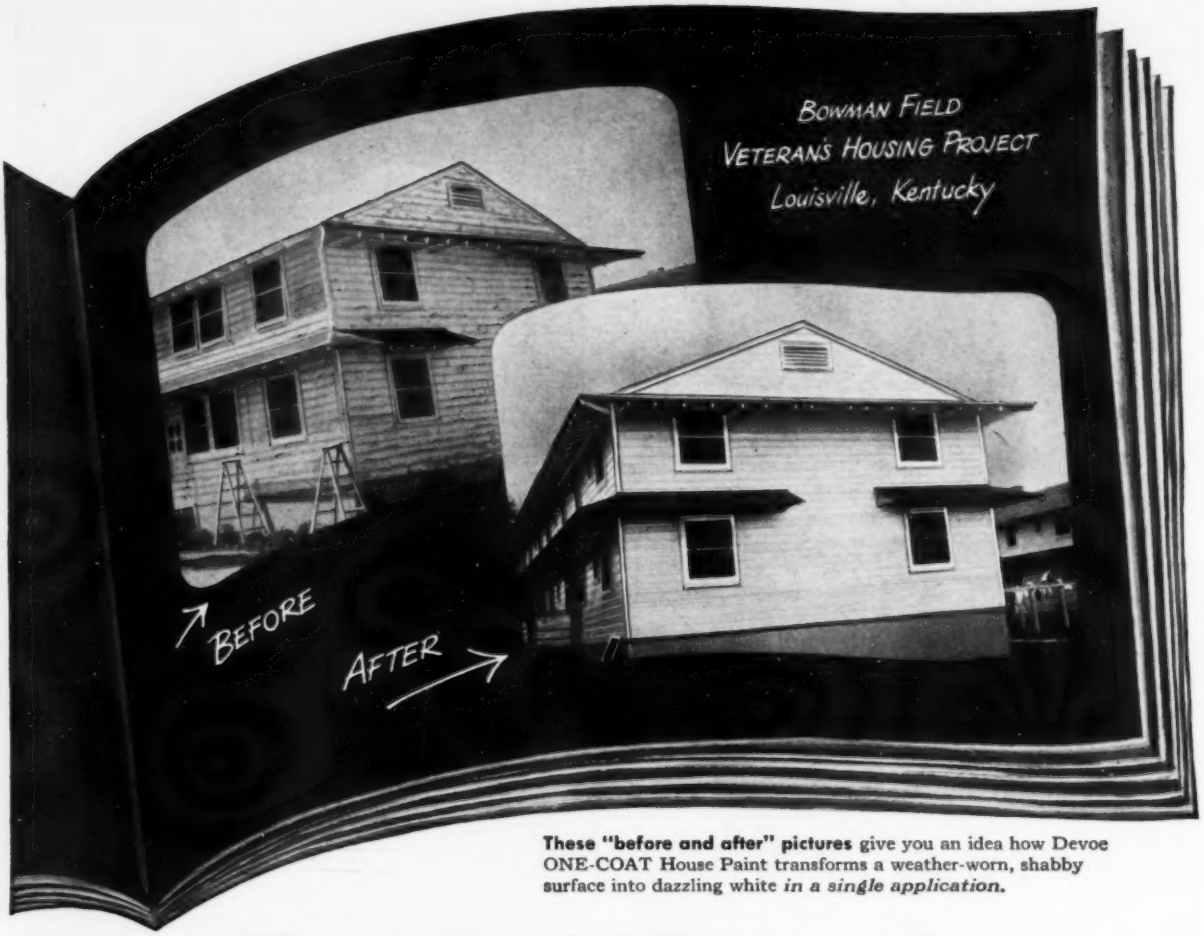


These "before and after" pictures give you an idea how Devoe ONE-COAT House Paint transforms a weather-worn, shabby surface into dazzling white *in a single application.*

Thousands of dollars saved repainting 489 public housing units with DEVOE ONE-COAT PAINTS—*inside and out*

The problem was to convert Bowman Field wartime barracks into 489 veteran housing units—and to do it *quickly* and *inexpensively*. Devoe paints solved all the painting requirements for the complete job.

Outside—tremendous savings were made possible by using Devoe One-Coat House Paint. This wonderful paint has more than *double* the whiteness units of other paints. A *single* coat completely covers surfaces that normally require *two* coats of old-style paint *—which meant thousands of dollars saved in painting costs on the Bowman Project.*

Inside—Devoe One-Coat paints were used to decorate *all* rooms. The toughness and washability of these interior paints are unusually high.

On all wire fences—Devoe's Aluminum Anti-Rust Paint has been used with great success. Not one case of rusting has occurred.

And for all garbage stations in this project, Devoe DDT paint has been used exclusively.

For your housing project—use Devoe one coat paints and save up to 40% in repainting costs. Write us what your requirements are—and we'll be very glad to tell you how Devoe can satisfy them *efficiently* and *economically*. Or better still, see us at Booth 53 at the Convention.

DEVOE & RAYNOLDS CO., INC.
787 First Avenue
New York 17, N. Y.

How Youngstown Kitchens
meet all low-cost housing requirements

As reported in the JOURNAL (December 1950 and June 1951), suggestions for ways to cut costs of building are the subject of discussion wherever and whenever building people meet.

Building code changes and modular coordination were two of the principal suggestions in the June 1951 JOURNAL. Neither of these is a problem in the selection of kitchen equipment. Instead, choice of equipment with an initial low cost, yet certain durability, is the first consideration.

Designed to modular dimensions by the world's largest makers of steel kitchens, Youngstown Kitchens meet every demand of cost and durability.

DURABLE, RUGGED

Each cabinet, Cabinet Sink, or other unit is die-made of sturdy steel of sufficient gauge to stand up under years of use. Warping, and the consequent sticking of doors and drawers, is thus avoided.

The enamel finish, applied twice and baked on, is tough and easy to keep clean. All units should last the lifetime of the house.

STAY SANITARY

Rounded, die-made contours and the smooth, white-enameled finishes make these Youngstown Kitchens units extremely easy to keep sparkling. "Sealer inserts" between cabinets and between the cabinets and Cabinet Sink make a smooth, crack-free joint, preventing grease and food particles from creeping into cracks. Back-splashes to the rear of the cabinet tops protect walls.

NO MAINTENANCE

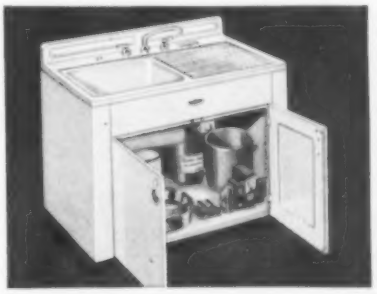
Except for an occasional waxing, Youngstown Kitchens cabinets require virtually no maintenance, such as is required by wood cabinets. The frequent repainting is unnecessary, as is the replacement of warped parts.

INITIAL LOW COST

Youngstown Kitchens steel units are produced in greater quantity than any others, permitting higher quality and more durability at a low initial cost. Because of this, Youngstown Kitchens have been used extensively by builders of small homes as well as large ones, and by makers of prefabricated housing as standard equipment.

FLEXIBILITY

Made to modular dimensions. Youngstown Kitchens steel cabinets in a wide range of sizes are available, and can be combined to meet perfectly any space requirements, offering more cabinet and counter space per square foot of floor space. If consulted in the planning stage, a Youngstown Kitchens planning expert is frequently able to make suggestions which result in considerable savings in equipment costs.



DISPOSER HELPS SOLVE HEALTH, SANITATION PROBLEMS

Since the principal aim of public housing is to make the living quarters of the less privileged both more healthy and more pleasant, many housing officials feel that the Youngstown Kitchens Food Waste Disposer is necessary equipment in any project. In some towns, automatic elimination of food waste is required by law.

Helps Control Rats, Flies

Garbage, the chief obstacle to fly control and a definite attraction to rats, is collected on the average of only twice a week. Yet to these two disease carriers many of our most dread plagues have been traced: dysentery, typhoid, typhus, bubonic plague, jaundice, and others.

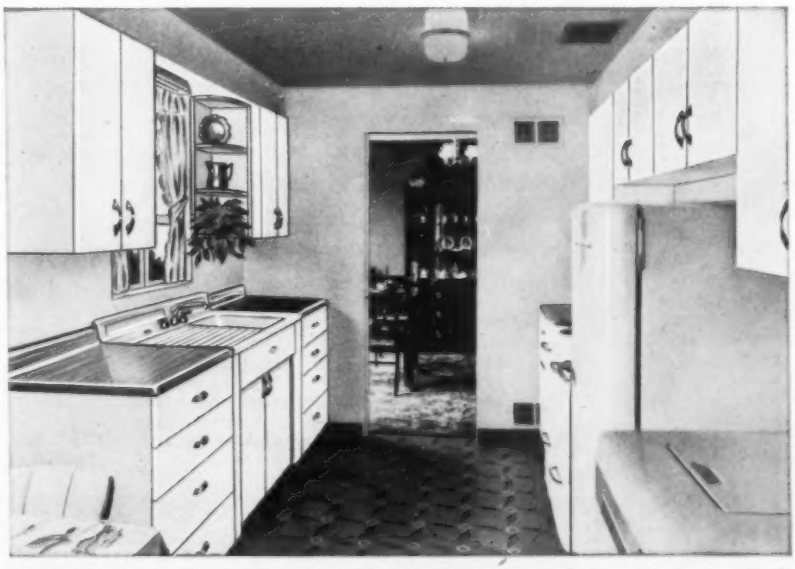
Adds Only 2% to Sewage

While eliminating garbage at the source by shredding it down the sink drain, a Youngstown Kitchens Food Waste Disposer not only helps keep the plumbing clean, but actually adds only a minute amount to the average sewage load, by volume. Ask a Youngstown Kitchens man about the advantages of this improved Disposer.

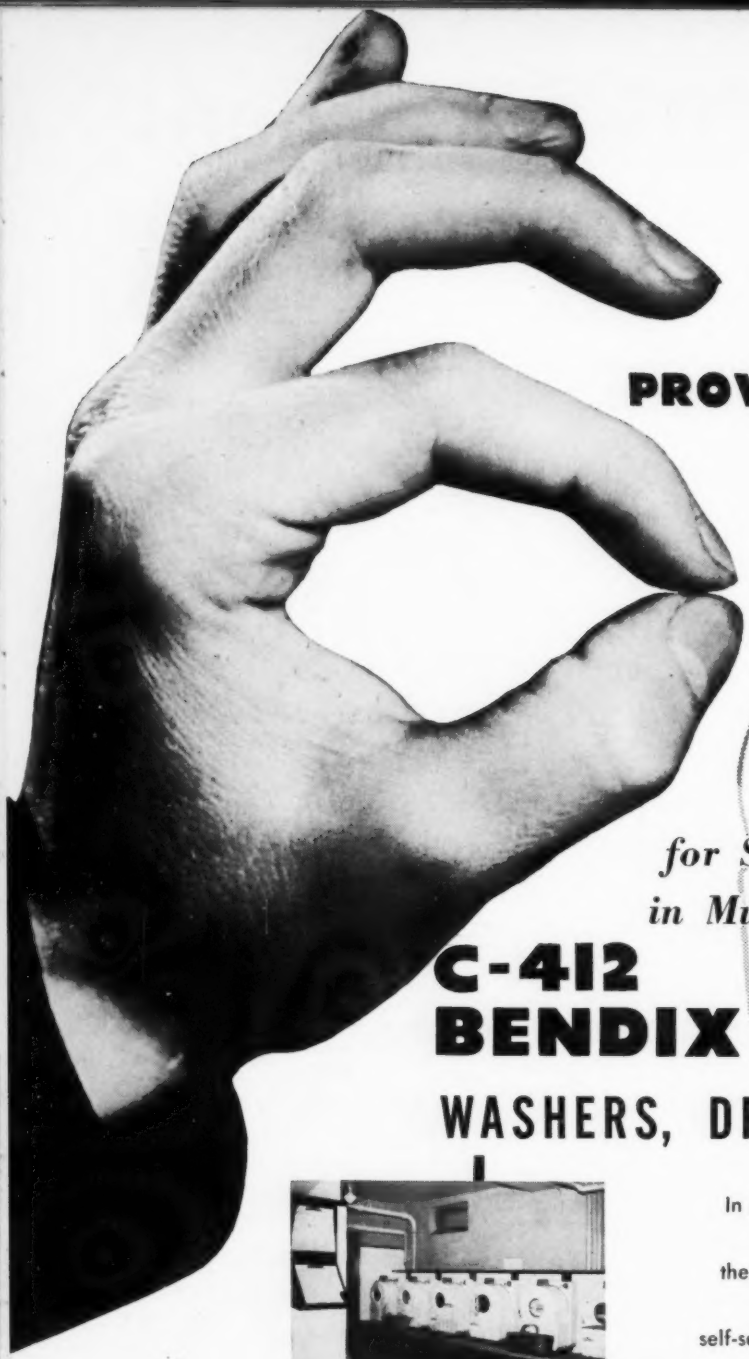
SEND FOR ADDITIONAL INFORMATION

For the complete details and cost-planning assistance, and for information about the 3-ways-best Youngstown Kitchens Food Waste Disposer, write to the address below:

Youngstown Kitchens, Builder Sales Division
MULLINS MANUFACTURING CORPORATION
WARREN, OHIO



A typical Youngstown Kitchen for a typical low-cost home. Note such luxury features as Maple Cutting Board Cabinet Top, 42" Twin-Bowl Cabinet Sink equipped with Food Waste Disposer.



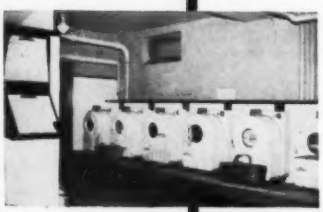
PROVEN PERFOMANCE!

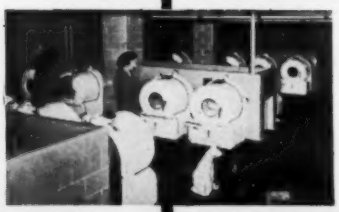
for Self-Service Laundry Rooms
in Multiple Housing Developments

C-412 BENDIX COMMERCIAL

coin-operated

WASHERS, DRYERS and EXTRACTORS





In planning your self-service laundry rooms remember that the only tried and proven self-service equipment is the Bendix Commercial Washer. It is the only "domestic type" washing machine that is designed expressly for self-service use by tenants in multiple dwellings; and, is approved by zoning authorities, FHA, Board of Standards and Appeals City of N. Y., etc. That is why more than 400,000 Bendix Commercial Washers are now rendering unexcelled service throughout the world.

Write — wire — phone Telecoin, the recognized specialist in this field, for complete laundry room equipment for NEW or EXISTING buildings. Bendix Commercial Washers are available ONLY from New York Telecoin Corp.

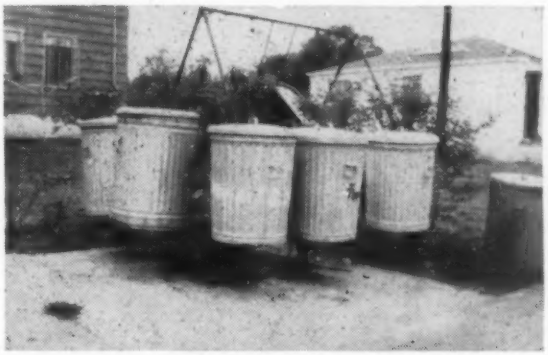
Our engineering staff is available to arrange all details, in compliance with your plans, for the proper installation of all laundry room equipment.

NEW YORK **TELECOIN** CORPORATION

"Originators and Pioneers of Launderettes and Automatic Self-Service Laundry Systems"

12 East 44th Street New York 17, N. Y. MUrray Hill 7-7800

GARBAGE ISN'T PRETTY

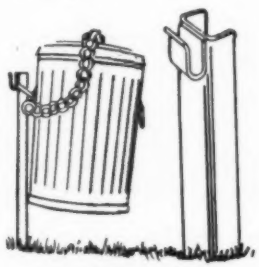


But It Doesn't Have To Be MESSY

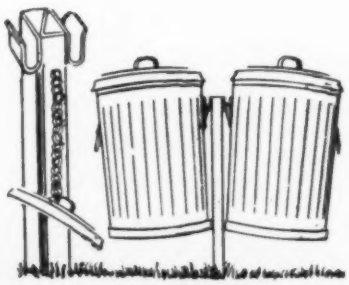
LET'S face it — garbage cannot be disguised to look like something else. In any form it remains —*garbage*. And it isn't pretty, particularly when it lies scattered all over the alley after being spilled out of the can by a roving dog, or when it becomes the breeding spot for millions of flies, or when rats, mice and other vermin are attracted by its careless backyard handling.

You cannot change garbage. But you *CAN* improve the job of handling it from the house (or apartment building) to the can, to the collecting service.

The CAN-PAR Garbage Can Holder (Patent No. 2,522,778) makes your job of backyard housekeeping easier, by bringing the can up off the ground so that overflow may be cleaned up, by preventing its being tipped over, by reducing damage to the can from careless handling. Thus, it assists in the control of vermin, pests and disease carrying flies and roaches; it improves the appearance of your property; it reduces the cost of exterminating service. The CAN-PAR Holder also lengthens the life of the garbage can by preventing bottom rust, freeze-down in winter, and other damage.



1-CAN MODEL



2-CAN MODEL

Used in Many Housing Projects

The inexpensive CAN-PAR Holder is easily installed by simply driving it into the earth. May be imbedded in concrete, if you wish. Made of 12-gauge cold rolled steel, 54 in. long, finished in bronze and baked on. Comes in one-can or two-can models. Also available with chain to prevent misplacement of lids.

C PAR N

Write for literature and prices

Cannon - Parker

DISTRIBUTORS

2906 Surrey Road **BIRMINGHAM 9, ALABAMA**

Greater rental appeal as food space grows! In the above illustration, the same food items are used in all three refrigerators. The new big cold space that apartment dwellers need is supplied by Kelvinator—without increasing floor space.

How Kelvinator DOUBLED Cold Space in the Same Floor Space!

From 4 cu. ft. in 1941, Kelvinator design increased cold space to 6 cu. ft. by 1946, in the same floor space. And today—*still in the same floor space*—the 1951 Model AA Kelvinator gives an amazing 7.6 cu. ft.! Nearly doubled cold space—including a big 25-lb. freezer chest. Here is space that meets today's needs. Space for frozen foods. Space for leftovers. Space for more fruits and vegetables. Space that means easier rentals—and greater tenant satisfaction. Satisfied tenants don't move.

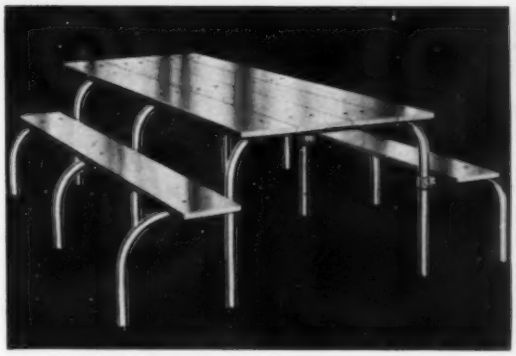
So . . . for the *small* difference in cost, why not give your tenants all this extra Kelvinator space and convenience?

Talk to Kelvinator
Booth #1
HOUSING CONVENTION
Statler Hotel, Washington, D. C.

Get more...Get Kelvinator

REFRIGERATORS • RANGES • FREEZERS • WATER HEATERS • AIR DRIERS

Kelvinator, Division of Nash-Kelvinator Corporation, Detroit 32, Michigan



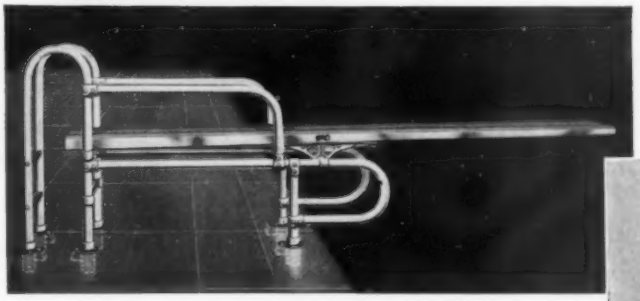
American Streamlined Heavy Duty Picnic Table

An American De Luxe Slide Combination Unit

Unsurpassed ...in Design, Performance and Safety

It's the *plus* factor that makes American the most respected name in Playground Equipment. First, plus in *design*. Never content to copy, American engineers have pioneered scores of design improvements and innovations. Next, plus in *performance*. Employing superior materials, master craftsmanship and improved production methods, American Approved Equipment is built to endure. Finally, plus in *safety*. American craftsmen are aware of their responsibility for the safety of your children. Thus, with American you receive a combination of far superior design, unexcelled performance, and unmatched safety.

The *plus* factor extends to our dealings with customers. You will find AMERICAN pleasant to do business with, prompt and equitable in adjustments, eager to protect an enviable reputation nearly half a century old.



Above—New All-American Picnic Grill

Below—An American Official Regulation One-Meter Diving Unit

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PLAYGROUND DEVICE CO.
ANDERSON, INDIANA

World's Largest Manufacturers of Fine Playground & Swimming Pool Equipment

Write Today FOR CATALOGS AND SPECIAL LITERATURE FEATURING AMERICAN APPROVED

PLAYGROUND EQUIPMENT • • • SWIMMING POOL EQUIPMENT • • • ALL-AMERICAN PICNIC GRILLS
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STEEL BASKET RACKS • • • AMERICAN REPAIR EQUIPMENT • • • AMERICAN HOME PLAY EQUIPMENT

Internationally Specified . . . . . Internationally Approved

CHICAGO—

(*Continued from page* 369)

By providing access to the individual apartments as well, only one elevator, placed where the two wings meet, is necessary in each building.

Design of the individual units has been particularly well adapted to the gallery plan. The schedule for Loomis Courts calls for 3½- and 4½-room apartments. There are three of the 4½-room units on each floor, placed at the ends of the galleries (the elevator replaces one of the units at the end of one of the wings). They have two bedrooms each; the 3½-room units have one and there are six of the smaller units to a floor.

All units have living and bedrooms with ample window space facing the off-gallery side, while kitchens, bathrooms, and hallways face on the gallery. Through ventilation is assured at the same time that privacy is maintained by windows set high in the wall on the gallery side.

Hallways are so situated as to assure complete privacy of circulation within each unit. Kitchens are fully enclosed and there is no need to pass through living rooms to reach bedrooms or bathrooms. Living rooms of the 3½-room apartments can be used for sleeping when needed, since the entrance hall combines with the dining area and living rooms are separate with direct access to bathrooms. Each unit has a room for storing perambulators.

By orienting the buildings so that no unit faces north only, every apartment is assured a maximum of sun and light. Bedrooms and living rooms of one wing face west; of the other, southeast.

Seven of the units have been designed especially for paraplegic veterans. Only extraordinary features that had to be incorporated into these units are wider than usual doorways to permit passage of wheel chairs and bedrooms that can be used for exercise. They are all located close to the elevator banks. When the need for such special accommodations has passed, the units can be converted without trouble into normal apartments.

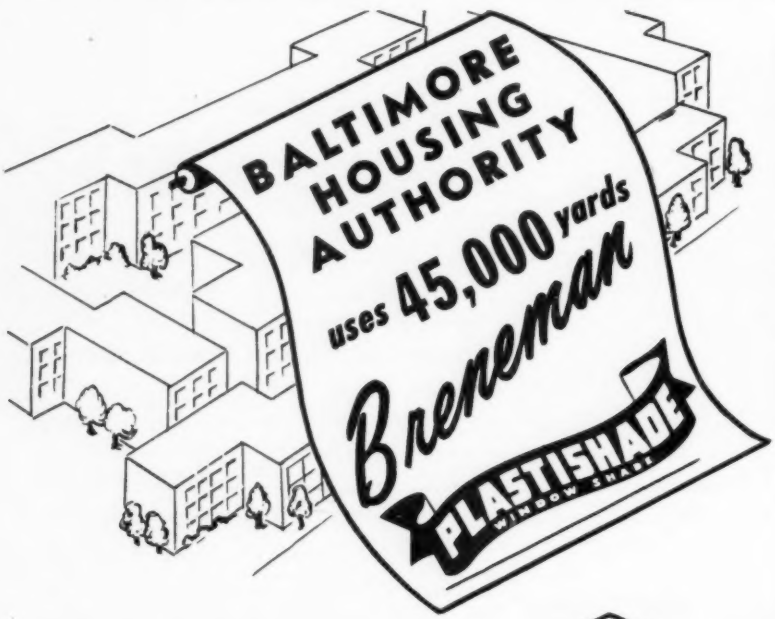
Site Plan

The imaginative site plan centers about a winding esplanade that runs around the buildings and passes between the two wings where they meet. Just beyond the junction are placed off-street parking areas, making them conveniently close to the elevator entrance lobbies. Beside the living areas of each section are large, protected, sunken green areas, which provide, aside from pleasant views, light and air for basement rooms on the off-gallery side. Dotted at well placed points around the site are play areas, some reserved for toddlers alone, others for older children—but all within eyesight of parents, yet removed from direct contact with living sides of the apartments.

Construction

The buildings have a reinforced concrete frame, concrete slab floors, and Chicago treated common brick facing. Interior walls are concrete block, lath, and plaster and projected steel windows have been used in conjunction with fixed sash.

Another of Chicago's relocation projects, Harrison Courts, designed for aged couples without children and other small families, was featured in the October 1950 special issue of the JOURNAL. In the November 1949 special issue, two of Chicago's relocation projects were presented—Leclaire Courts, specially designed for large families; and Ogden Courts, another gallery type project.



Made of genuine 6 gauge Vinylite Plastic, this better shade material doesn't pinhole, crack or fray — washable and flameproof; a long wearing shade at low cost. Backed by Breneman's century of manufacturing experience — obtainable from your local shade source.

See Breneman's better shades and blinds at the NAHO Convention — Booth 9 — Hotel Statler, Washington — October 9 - 12.

THE CHAS. W. Breneman COMPANY

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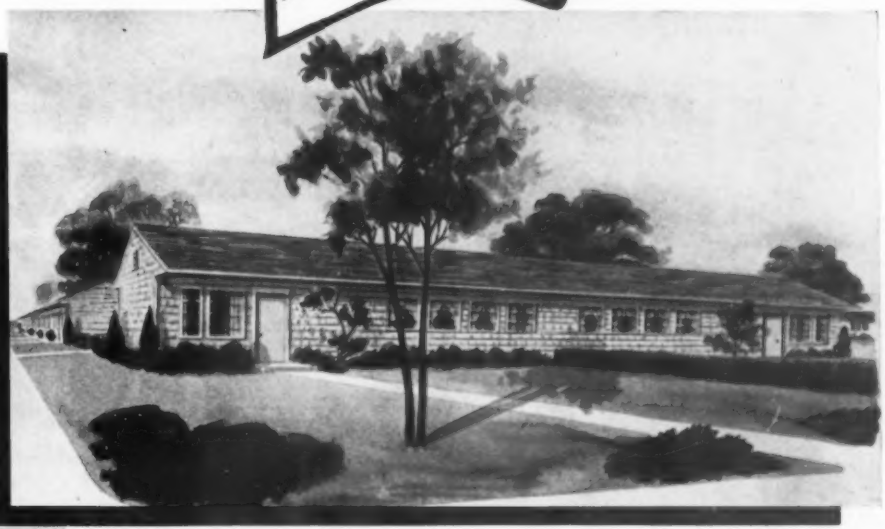
WANT TO SLASH CONSTRUCTION AND MAINTENANCE COSTS?



COMPLETE

GUNNISON HOMES can be under roof in one day! Precision manufacturing methods reduce skilled labor requirements at the site of erection . . . reduce building costs—important points in project planning! GUNNISON HOMES are shipped as a package (except for plumbing, wiring and masonry work) . . . GUNNISON HOMES are COMPLETE!

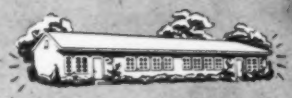
STRONG

GUNNISON HOMES are durable! The evidence of GUNNISON HOMES built in 1936 is positive proof that they are built to last! Whether it's wear or weather, GUNNISON HOMES take the physical strain easily! With GUNNISON HOMES . . . you'll have STRENGTH!

LOW MAINTENANCE

GUNNISON HOMES are built for low-cost maintenance—inside and out! The interior Mellow-tone walls and the exterior walls can be cleaned easily . . . removing the abusive marks of children! All over the country, owners find that GUNNISON HOMES offer very low upkeep cost! You'll find that GUNNISON HOMES are practically MAINTENANCE FREE!

HIGH QUALITY



GUNNISON HOMES offer the best materials that money can buy! GUNNISON HOMES are economical to maintain . . . tight construction and insulation reduces heat loss! The use of fine materials, at a minimum of cost, places GUNNISON HOMES out front! Moreover GUNNISON HOMES combines ECONOMY with QUALITY!

GUNNISON HOMES has the answer!

William E. Bergeron, director of the Chicago field office of the Public Housing administration, announced that GUNNISON HOMES' plant in New Albany, Indiana will roll from its assembly lines 91 prefabricated buildings included in a project being built by the housing authority in New Albany. Bergeron also said the average room cost of $1,654 for the New Albany project, including ranges and refrigerators, is the lowest among 30 public, low-rent projects now under construction in the midwestern area administered by his office.

GUNNISON HOMES will be pleased to help you with your housing problem! Remember, with GUNNISON HOMES, you get more, pay less—and receive the best.

For additional information, write GUNNISON HOMES, Inc., Dept. JH-2, New Albany, Indiana.

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UNITED STATES STEEL (USS) CORPORATION SUBSIDIARY

NEW ALBANY, INDIANA

"Gunnison," "Coronado" and "Champion"—T.M. Gunnison Homes, Inc.

Personnel Exchange

POSITIONS AVAILABLE

A64—PROJECTS OPERATIONS ADVISER

To serve as staff assistant to the director of management, Housing Authority of Baltimore City, in the administration and coordination of all phases of the authority's 18 housing projects operations. Conducts independent investigations of projects operations through personal visits, correspondence, or phone. Advises the director of the status of and need for improvement in projects operations. Evaluates the effectiveness of policies and procedures at the project level and recommends changes to improve operations. Keeps personnel in central office informed on projects' problems and projects informed of availability of specialized services from central office. Coordinates authority's program for removal of over-income tenants and assists in training personnel.

Qualifications: college degree in public or business administration or social sciences. Five years progressively responsible administrative experience. Experience as public housing manager very desirable.

Salary range—$5250 to $6350.

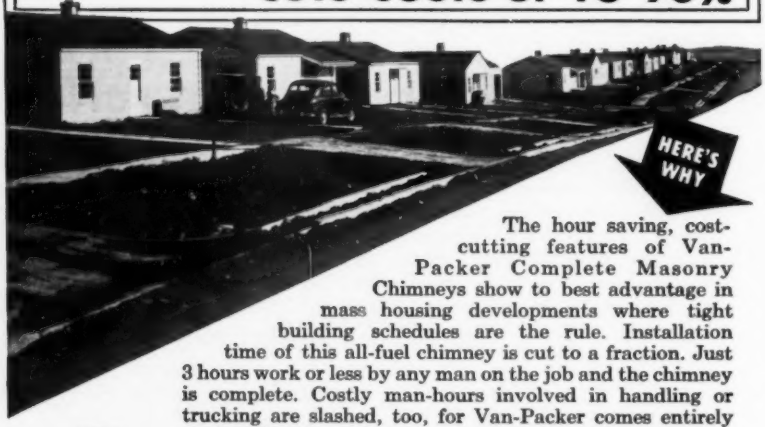
Write Personnel Director, Housing Authority of Baltimore City.

A65—DIRECTOR OF MANAGEMENT

Duties include planning, organization, direction, and coordination of all phases of management and maintenance of a housing program in upper New York state comprising three projects currently being expanded from 1100 to 1400 dwelling units. Responsible for selection of tenants, rent schedules, and tenant relations.

Training and experience desired include four years of college or equivalent training in business, public administration, or the social sciences; at least seven years responsible experience in business, public administration, or property management, of which at least four should be on the executive level in public housing management. Salary: $5850.

IN MASS HOUSING DEVELOPMENTS
VAN-PACKER *Complete Chimney*
CUTS COSTS UP TO 90%



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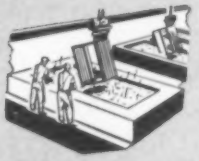

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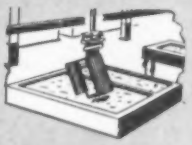

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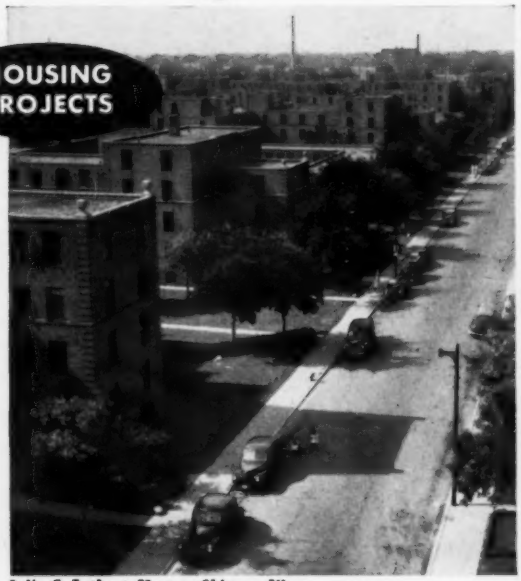

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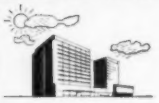

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